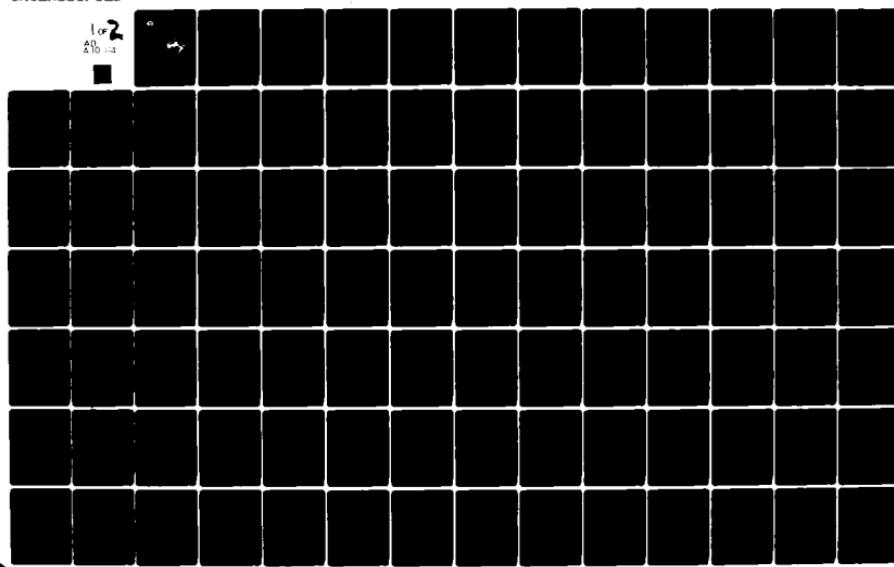


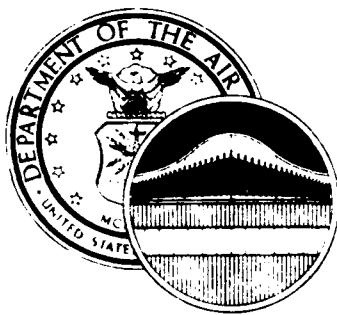
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UNITED STATES AIR FORCE

10 Carlton F. Middleton

# OCCUPATIONAL SURVEY REPORT.



6 PRECISION IMAGERY AND AUDIOVISUAL MEDIA  
MAINTENANCE CAREER LADDER  
AFSC 404X0  
AFPT 90-404-423  
11 MAY 1981

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JUL 8 1981

OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT CENTER  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78148

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## PREFACE

This report presents the results of a detailed Air Force occupational survey of the Precision Imagery and Audiovisual Media Maintenance (AFS 404X0) career ladder. This Occupational Survey Report (OSR) was requested by the AFSC 404X0 Training Staff Officer (TSO), Air Training Command/Technical Training (HQ ATC/TTQ). Information in this report will be used to evaluate training and to consider a possible shredout for the seemingly divergent Defense Audiovisual Agency (DAVA) and Aerospace Audiovisual Service (AAVS) group at Norton AFB CA. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The Air Force occupational analysis program has been in existence since 1956 when initial research was undertaken by Air Force Human Resources Laboratory (AFHRL) to develop a methodology for gathering and analyzing occupational information. In 1967, an operational occupational analysis program was established within the Air Training Command and surveys were produced annually for 12 enlisted specialties. In 1972, the program was expanded to conduct occupational surveys covering 51 career fields annually. In late 1976, the program was again expanded to include the survey of officer utilization fields, to permit special management applications projects, and to support interservice or joint service occupational analysis.

The survey instrument used in the present project was developed by Second Lieutenant Kevin F. Morefield, Inventory Development Specialist. Second Lieutenant Carlton F. Middleton analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

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## SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to all AFS 404X0 Precision Imagery and Audiovisual Media Maintainence personnel. Survey results are based on the responses from 279 incumbents or 79 percent of the total assigned members.
2. Career Ladder Structure: Incumbents were found to be performing a wide variety of jobs differing primarily on the basis of equipment maintained. Major groupings identified included: (1) Supervisors; (2) Camera Maintenance Personnel; (3) Photographic Support Systems and Audiovisual Equipment Maintenance Personnel; and (4) Photographic Support Systems and Processor/Printer Maintenance Personnel.
3. Career Ladder Progression: Three-skill level personnel perform a strictly technical job, with a higher percentage of group members performing camera maintenance tasks than any other group. Five-skill level personnel also perform primarily a technically-oriented job, with some supervisory and more administrative responsibilities being picked up. Also, a higher percentage of 5-skill level incumbents perform maintenance on processors and mobility laboratories than any other group. At the 7-skill level, both technical and supervisory functions are being performed, with roughly half the time being spent in each area. At the 9-skill and CEM Code 40400 level, incumbents become managers of the career ladder and perform strictly supervisory and managerial type functions. Similar trends were noted for TAFMS groups.
4. Training Review: The AFR 39-1 specialty descriptions were found to be an accurate representation of the overall job performed by career ladder personnel. No major changes were recommended. Analysis of the 404X0 Specialty Training Standard (STS), dated July 1977, revealed the document to be accurate overall, with only minor changes suggested. The Plan of Instruction (POI) for course G3ABR40430, dated June 1980, was also analyzed and found to provide comprehensive and appropriate training to personnel entering the 404X0 career ladder.
5. Analysis of CONUS versus Overseas Groups: Only minor differences were noted in terms of tasks performed. However, overseas personnel performed a somewhat broader job, with more time spent by these individuals in the areas of processor and mobile facility maintenance.
6. Major Command Comparison: Differences were found across the five major using commands in terms of jobs and tasks performed, equipment maintained, and job satisfaction. MAC and ATC personnel spent more time than the other commands maintaining camera systems. USAFE and TAC personnel spent the most time maintaining processors and printers. USAFE personnel also spent the most time maintaining mobile facilities.
7. DAVA/AAVS: Possibly due to its recent creation, no respondent reported being assigned to the DAVA; however, 10 respondents were assigned to the AAVS and they were all stationed at Norton AFB, CA. Unexpectedly, these incumbents did not group together on the basis of the tasks they perform. Rather, they were spread throughout the career ladder structure.

This leads to the conclusion that the AAVS group at Norton does not perform a job that is substantially different from that of other 404X0 incumbents. Consequently, no classification action seems warranted in terms of a shred for these incumbents.

8. Implications: Overall, the 404X0 career ladder is fairly heterogeneous, with personnel reporting maintenance on an extensive amount of equipment. Individuals perform distinctly different jobs in the career ladder based on the equipment systems they maintain. These systems tend to be used by some MAJCOMs more than others.

OCCUPATIONAL SURVEY REPORT  
PRECISION IMAGERY AND AUDIOVISUAL MEDIA MAINTENANCE  
(AFSC 404X0)

INTRODUCTION

This is a report of an occupational survey of the Precision Imagery and Audiovisual Media Maintenance career ladder (AFSC 404X0) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in February 1981. A previous survey of the 404X0 career ladder was published in November 1976 as part of a combined report with the Aerospace Photographic Systems career ladder (404X1).

Background

The 404X0 career ladder was created on 30 September 1964 from the 402X0 Photographic Repairman specialty. Originally, the career ladder title was called the Precision Photographic Systems specialty. This title remained with the career ladder until 30 April 1978 when it was changed to the Precision Imagery and Audiovisual Media Maintenance specialty, still with the AFSC designation of 404X0. Originally, the 9-skill level for the 404X0 career ladder was designated as 40490; however, on 30 April 1978, the 9-skill levels for the 404X0 and the 404X1 career ladders were merged to form a single 9-skill level designation of 40499 for both fields. On 31 October 1978, the Chief Enlisted Manager (CEM) Code 40400 was created from the 40499 DAFSC.

As described by AFR 39-1, the basic job of 404X0 personnel consists of maintaining, inspecting, and testing ground electronic precision imagery and audiovisual systems and associated electronic test equipment. Generally, this includes adjusting subsystems, lubricating and cleaning equipment, operating equipment, troubleshooting malfunctioning equipment, repairing or replacing defective components, and maintaining relocatable facilities. Some of the common equipment maintained are cameras, flash units, film processors, printers, densitometers, color analyzers, PA systems, audio recorders, thermofax and other graphics equipment, PH meters, and others. Power tools, such as drill presses, drills, grinders, torches, and soldering irons are commonly used in this work. To aid in the performance of these services, a mandatory basic technical training course is offered at Lowry AFB CO. This course lasts 78 days and graduates approximately eight personnel each class.

Objectives

The current project was requested by the 404X0 Training Staff Officer, HQ ATC/TTQ. It is designed to determine whether a seemingly unique job is being performed by the DAVA/AAVS personnel at Norton AFB CA and, if so, whether or not they should be trained separately. Another issue which was of interest to requesting officials was the possibility of a merger of the 404X0 personnel into the 23XXX career field; however, answers to this issue could not be addressed in this study since only the 404X0 ladder was surveyed.

To better deal with the issue of merger, a combined survey of the 23XXX and 404X0 ladders together would be required. Topics discussed in this report include: (1) survey methodology; (2) job structure within the ladder; (3) an analysis of skill level and MAJCOM groups; (4) an analysis of experience groups; and (5) a comparison of the results of the current survey with the previous survey.

## SURVEY METHODOLOGY

### Inventory Development

Data collection for this Occupational Survey Report was accomplished using USAF Job Inventory AFPT 90-404-423. As a starting point, tasks listed in the 1975 inventory were reviewed for currency. Next, pertinent career ladder publications and directives were reviewed for additional tasks. From this process, a new tentative task list was developed. The tentative inventory was then taken into the field for validation by subject matter specialists working in operational units, and by personnel at the Technical Training school located at Lowry AFB. From this review process, a final inventory was developed consisting of 831 tasks grouped under 13 duty headings. Also included was an extensive background section that included questions regarding work location, mobile facility maintained, and still cameras, copy cameras, motion picture cameras, aerial cameras, processors, printers, audovisual equipment, photographic support equipment, and photographic editing equipment maintained. Other items included test equipment and shop equipment used in the job.

### Survey Administration

During the period from July to October 1980, local consolidated base personnel offices (CBPOs) administered job inventories to all DAFSC 404X0 and 40499 personnel at operational units both in the continental United States (CONUS) and overseas. Personnel were selected from Uniform Airman Record (UAR) data tapes generated by the Air Force Manpower and Personnel Center (AFMPC) and maintained by the Air Force Human Resources Laboratory (AFHRL).

The 404X0 job inventory consisted of two sections: (1) a background section which included questions about such items as job satisfaction, equipment used, and (2) a task section listing all tasks which could be performed by career ladder personnel. Incumbents first checked the tasks they performed and then rated each task on a nine-point scale showing time spent on that task as compared to all other tasks checked. The rating scale ranged from one (very small amount of time spent) to nine (very large amount of time spent), with a rating of five representing an average amount of time spent performing a task.

To determine the relative amount of time an incumbent spends on each task, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job. The ratings are then summed and each task rating is then divided by the total number of task responses and the

quotient is multiplied by 100. This procedure provides a basis for comparing tasks not only in terms of percent members performing, but also in terms of average percent time spent.

#### Data Processing and Analysis

Once job inventories are returned from the field, they are prepared so that task responses and background information can be optically scanned. Other biographical information (such as name, base, AUTOVON extension) are keypunched onto disks and entered directly into the computer. Once both sets of data are entered into the computer, the task, background, and biographical information are merged to form a complete case record for each respondent. Computer generated programs using Comprehensive Occupational Data Analysis Programs (CODAP) techniques are then applied to the data.

CODAP produces job descriptions for respondents based on their responses to specific inventory tasks. Computer generated job descriptions are available for DAFSC, TAFMS, and MAJCOM groups, and include such information as percent members performing each task, the average percent time spent performing each task, the percent members utilizing various pieces of equipment, and the cumulative average percent time spent by all members for each task in the inventory.

A key aspect of the USAF occupational analysis program is to examine the structure of career ladders in terms of what people are actually doing in the field, rather than how official career ladder documents say they are organized. This is accomplished by performing a cluster analysis on the task responses of 404X0 respondents. Those incumbents who perform similar tasks and who spend similar amounts of time on those tasks will normally group together.

#### Survey Sample

One hundred percent of the 404X0/99 population was solicited to participate in this survey so as to insure a representative sample across all segments of the career ladder. Table 1 reflects the major command distribution of personnel assigned to the 404X0/99 career field as of October 1980. Table 2 reflects the percentage distribution by paygrade. Table 3 reflects the distribution of the survey sample in terms of TAFMS. Overall, useable returned inventories were received from 279 out of the 354 total assigned or 79 percent of the total assigned population.

#### Task Factor Administration

In addition to completing a job inventory booklet, selected senior 404X0 personnel were also asked to complete a second booklet for either task difficulty or training emphasis. The task difficulty and training emphasis booklets were processed separately from the job inventories. The task difficulty ratings were then used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each senior NCO completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale from extremely low to extremely high difficulty, with difficulty defined as the length of time it takes an average incumbent to learn to do the task. Ratings were then adjusted so that tasks of average difficulty reflect a rating of 5.00.

Task difficulty data were independently collected from 30 experienced 7-skill level personnel assigned to a number of different major commands. The interrater reliability (as assessed through components of variance of standard group means) of .92 for these 404X0 raters reflected acceptable agreement and was considered useable by normal reliability criterion. The resulting data was a rank ordering of tasks indicating a relative degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After computing a task difficulty value for each task item, it was then possible to compute a Job Difficulty Index (JDI) for the groups identified in the job structure analysis. This index provided a relative measure of which jobs, when compared to other jobs identified, were more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent as variables was the basis for the JDI. The index ranges from one for very easy jobs to 25 for very difficult jobs. The indices were adjusted so that the average job difficulty index was 13.00. Thus, the more time a group spends on difficult tasks, and the more tasks they perform, the higher their job difficulty index.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate all of the tasks on a ten-point scale from no training required to extremely heavy training required. Training emphasis yields a rating of tasks indicating where the emphasis should be placed on structured training for first-term personnel. Unfortunately, training emphasis ratings by 404X0 subject matter specialists showed high disagreement among raters. As a result of this, interrater reliability was too low to allow utilization of training emphasis data. Consequently, Training Emphasis is not addressed in this report.

TABLE 1  
COMMAND REPRESENTATION OF SURVEY SAMPLE

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
TAC	21	21
MAC	20	19
SAC	18	22
USAFE	17	17
ATC	10	11
PACAF	7	6
OTHER	7	4
TOTAL ASSIGNED: 354		
TOTAL SAMPLED: 279		
PERCENT SAMPLED: 79%		

TABLE 2  
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	32	35
E-4	22	17
E-5	26	27
E-6	13	13
E-7	5	5
E-8	1	2
E-9	1	*

\* DENOTES LESS THAN ONE PERCENT.

TABLE 3  
AFMS DISTRIBUTION OF 404X0 SAMPLE

	MONTHS	TOTAL	ACTIVE	FEDERAL	MILITARY	SERVICE
	1-48	49-96	97-144	145-192	193-240	241+
NUMBER IN SAMPLE	115	47	50	36	19	10
PERCENT OF SAMPLE	41%	17%	18%	13%	7%	4%

## CAREER LADDER STRUCTURE

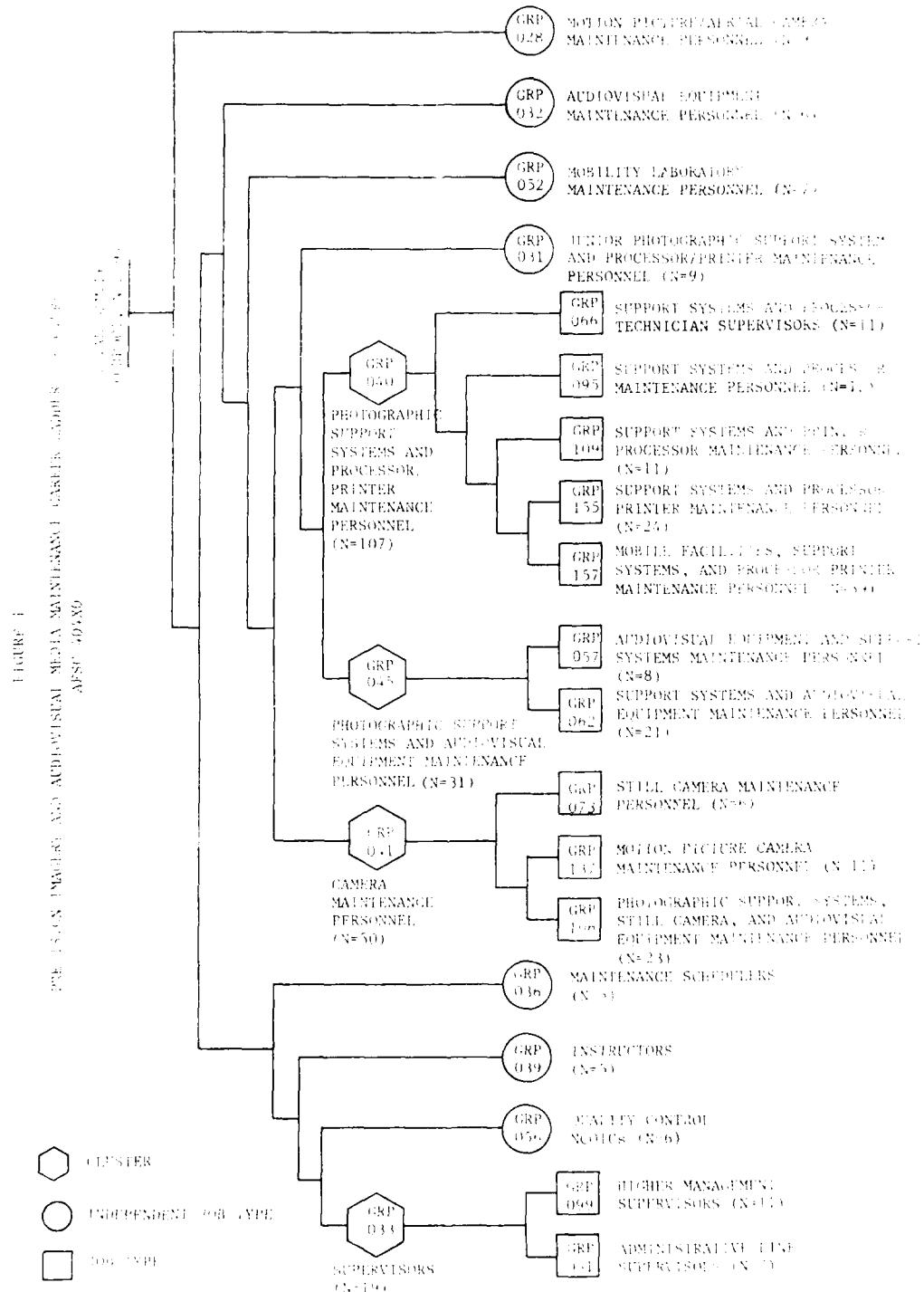
One of the most important aspects of the USAF occupational analysis program is the career ladder structure analysis. This analysis examines the diversity of the jobs being performed by career ladder incumbents on the basis of the similarity of tasks performed and the percent time spent on tasks, independent of classification, grade, rank, or other background information.

The Comprehensive Occupational Data Analysis Program (CODAP) provides a hierarchical grouping in which each individual job description in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the job inventory. The automated system locates the two job descriptions with the most similar tasks and percent time ratings and combines them to form a composite job description. Then, in successive stages, new members are added to initial groups or new groups are formed based on their task and time rating similarities. This procedure continues until all members of the sample have been included and combined into a single composite group. The end-product of this procedure is a computer printout displaying each group as it relates to all other groups. This display is then analyzed using a variety of supporting computer products. This analysis serves to identify: (1) the number and characteristics of the different jobs which exist within the career ladder; (2) the tasks which tend to be performed together by the same respondents; and (3) the breadth of the jobs which exist within the career ladder.

The basic identifying group used in the hierarchical job structuring process is the job type. A job type is a group of individuals who perform many of the same tasks and spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. In many career ladders, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled independent job types.

Based on task similarity, the division of actual jobs performed in the 404X0 career ladder is illustrated in Figure 1. The seven independent job types and four clusters with component job types are listed below. (The GRP number shown beside each title is a reference to computer printed information included for use by classification and training officials.)

- I. SUPERVISORS (GRP033, N=19)
  - a. Administrative Line Supervisors (GRP051, N=7)
  - b. Higher Management Supervisors (GRP099, N=11)
- II. QUALITY CONTROL (QC) NCOICs (GRP056, N=6)
- III. INSTRUCTORS (GRP039, N=5)
- IV. MAINTENANCE SCHEDULERS (GRP036, N=5)



- V. CAMERA MAINTENANCE PERSONNEL (GRP041, N=50)
  - a. Photographic Support Systems, Still Camera, and Audiovisual Equipment Maintenance Personnel (GRP106, N=23)
  - b. Motion Picture Camera Maintenance Personnel (GRP137, N=11)
  - c. Still Camera Maintenance Personnel (GRP073, N=6)
- VI. PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP045, N=31)
  - a. Support Systems and Audiovisual Equipment Maintenance Personnel (GRP062, N=21)
  - b. Audiovisual Equipment and Support Systems Maintenance Personnel (GRP057, N=8)
- VII. PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP040, N=107)
  - a. Mobile Facilities, Support Systems, and Processor/Printer Maintenance Personnel (GRP157, N=39)
  - b. Support Systems and Processor/Printer Maintenance Personnel (GRP155, N=24)
  - c. Support Systems and Printer/Processor Maintenance Personnel (GRP109, N=11)
  - d. Support Systems and Processor Maintenance Personnel (GRP095, N=12)
  - e. Support Systems and Processor Technician Supervisors (GRP066, N=11)
- VIII. JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP031, N=9)
- IX. MOBILITY LABORATORY MAINTENANCE PERSONNEL (GRP052, N=7)
- X. AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP032, N=6)
- XI. MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL (GRP028, N=9)

Overall, the 404X0 career ladder was found to be fairly heterogeneous in nature. Little overlap in terms of tasks performed was found between the separate clusters and independent job types. Although the maintenance of photographic support and processing systems was performed by a substantial number of incumbents across most groups, no set of general tasks common to all members of the career ladder was found. The major differentiating factor between job groups was the equipment maintained, with most groups concentrating on the maintenance of a specific precision imagery or audiovisual media equipment system or set of systems.

The clusters and independent job types listed above comprised 91 percent of the total sample. The remaining nine percent of the sample was comprised of individuals who reported performing a job too dissimilar to be grouped with any of the identified groups. These incumbents were scattered across the various jobs identified in the cluster-merger diagram. Computer

programed calculations of job similarity indicated that, on the basis of the tasks that these personnel reported performing, they could not be included in any of the already identified groups nor could they be grouped together as a separate group of their own.

#### Job Group Descriptions

A brief description of each of the four clusters and seven independent job types is given below. Job types which combined to form each cluster are discussed in detail in Appendix A. Tables 4 through 9 list pertinent information relating to the clusters and independent job types. Table 4 and 5 reflect the relative time spent by incumbents on the various duties listed in the job inventory. Tables 6 and 7 list demographic background information for the clusters and independent job types, while Tables 8 and 9 reflect job satisfaction data. Representative duties and tasks, as well as equipment maintained, are listed in more detail for each group in Appendix B.

I. SUPERVISORS (GRP033). This cluster of 19 members spent 91 percent of their job time on managerial and supervisory functions. None of the members reported maintaining any still cameras, and only one member reported maintaining motion picture cameras. Common tasks performed included:

- counsel personnel
- assign personnel to duty positions
- determine requirements for space, personnel, equipment, or supplies
- prepare APRs
- determine work priorities
- plan work assignments

As could be expected, the Supervisors cluster was one of the more senior groups in the study, with members averaging 160 months in the career field. Members reported a limited job, with an average of only 64 tasks being performed, the majority of which were nontechnical in nature. Job satisfaction was not diminished, however, by the narrow focus of their job, with 84 percent of the supervisors finding their job interesting.

II. QUALITY CONTROL NCOICs (GRP056). These six personnel are responsible for inspecting equipment and evaluating procedures to determine compliance with standards. Five of the six members indicated their work area as the base photo lab. Very little actual maintenance is performed. Job time for the six individuals in this independent job type was moderately dispersed across different duty areas, with administrative and inspecting/evaluating duties leading all others in time consumption (see Table 5 and Appendix B). Incumbents performed such tasks as:

- make entries on quality control forms
- evaluate corrosion control programs
- evaluate compliance with performance standards
- inspect compliance with performance standards
- inspect processors
- inspect densitometers
- update local operating instructions

As Table 7 illustrates, all of the Quality Control NCOICs were 7-skill level personnel, with half of them stationed overseas. These personnel were the most senior respondents in the study, with an average time in career field of 180 months and an average time in service of 193 months. Members of this group performed an average of 122 tasks. Four members (67 percent) were assigned to MAC.

III. INSTRUCTORS (GRP039). Classroom instruction and training of 404X0 personnel best describes the job of these incumbents. The five respondents in this independent job type had responsibilities covering such areas as testing and demonstrating maintenance methodology, counseling, and administrative functions. Common tasks performed by these individuals included:

- conduct resident course classroom training
- administer tests
- score tests
- develop training aids
- develop tests
- counsel trainees on training progress

Instructors reported performing an average of only 51 tasks. However, 100 percent of the sample reported their job as being interesting (see Table 9). All members of this group were 7-skill level personnel assigned to the Air Training Command (ATC). All of these individuals were assigned to Lowry AFB, CO which is the location of the 404X0 Technical School. All members of this group stated their job title as that of instructor, but only one member listed a T prefix DAFSC.

IV. MAINTENANCE SCHEDULERS (GRP036). The five incumbents in this independent job type take orders for maintenance from diverse requesters and send the equipment and a work order to the shop. They do no "hands-on" work themselves; rather, they schedule work and keep a list of equipment with a monthly maintenance plan. The technical order (TO) files for the 404X0 career ladder are also maintained by these personnel. Common tasks of this group include:

- coordinate maintenance or repair
- maintain maintenance record files
- determine work priorities
- direct maintenance of status boards
- make entries on forms
- prepare maintenance analysis reports

Eighty percent of these respondents found their job interesting, even though they spent their time performing an average of only 16 tasks. All of these individuals were 5-skill level personnel reporting no personnel under their supervision. Four of these members (80 percent) were assigned to MAC. There were no maintenance schedulers reporting assignments overseas. Of the CONUS assignments, 60 percent were located at Vandenberg AFB, CA.

V. CAMERA MAINTENANCE PERSONNEL (GRP041). These 50 respondents comprised the second largest group in this study (18 percent of the total sample). These members were concerned primarily with the maintenance and repair of still and motion picture cameras although they did perform maintenance on other systems, such as audiovisual equipment and photographic support systems. Primary work areas indicated were the base photo lab and audiovisual library. These incumbents focused on three areas which were identified as job types within the cluster-- (1) support systems, still camera, and audiovisual equipment maintenance; (2) motion picture camera maintenance; and (3) still camera maintenance. Typical tasks performed included:

- isolate malfunctions in film advance mechanisms
- isolate malfunctions in electrical systems
- isolate malfunctions in focal plane shutters
- inspect lenses
- inspect range finders
- isolate malfunctions in electronic flash units
- isolate malfunctions in lens assemblies

This cluster of incumbents had the broadest range of tasks in the career ladder, with members performing an average of 291 tasks. In addition, their job was found to be the most difficult, with a JDI of 18.0 (see discussion of JDI in Task Factor Administration section). This high a JDI is most likely due to the high number of tasks performed by these individuals, since the average difficulty per unit time spent (ATDPUTS) was not the highest of any group. Eighty-eight percent of these personnel found their job interesting and felt their talents were utilized fairly well.

VI. PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP045). Like personnel in the Camera Maintenance cluster above (V), these 31 members also maintain a diverse number of equipment and systems, primarily in base photo labs and audiovisual libraries. However, they concentrate primarily on the maintenance of photographic support systems, such as print washers and dryers, and audiovisual equipment, such as projectors. Representative tasks include:

- isolate malfunctions in print dryers
- inspect print dryers
- isolate malfunctions in slide projectors
- isolate malfunctions in sound motion picture projectors
- adjust print dryers
- inspect print washers
- adjust slide projectors
- perform operational checks on print dryers
- inspect projection printers
- inspect sound motion picture projectors

This cluster was subdivided into two job types, one emphasizing the audiovisual equipment maintenance aspect of the job and the other emphasizing the support systems maintenance aspect.

The average number of tasks performed by individuals in this group was 137. Job satisfaction for these personnel was the lowest of any cluster or independent job type, with only 61 percent of the incumbents finding their job interesting.

VII. PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP040). The 107 members of this, the largest cluster of the career ladder, are involved with maintaining support systems, processors, and printers. However, the main concentration of their job time is spent on the maintenance of processors and related support systems. Printer systems are also maintained but to a lesser degree. Personnel within this cluster fall into five separate job types depending on the area of concentration of their job. These areas include: (1) mobile facilities maintenance, (2) processor/printer maintenance, (3) printer/processor maintenance, (4) processor maintenance, and (5) processor technician-supervisors. Work areas indicated by members varied considerably. Four of the five groups worked at mobile reconnaissance labs and nonmobile facilities at reconnaissance technical squadrons. The fifth job type group worked more at base photo labs and audiovisual libraries. Typical tasks of incumbents in this cluster are:

- inspect processors
- perform corrosion control on processor systems
- perform operational checks on processors
- isolate malfunctions in densitometers
- isolate malfunctions in titlers
- isolate malfunctions in continuous contact printers

Comprising 38 percent of the sample, these personnel reported performing an average of 169 tasks. Seventy-one percent found their job interesting and 73 percent felt their talents were utilized fairly well or better.

VIII. JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP031). This nine member independent job type is very similar to the previous group in that these personnel also work primarily with processors and their related support systems and, to a lesser degree, printers. However, they spend more time on processor and support system maintenance than the previous group (79 percent versus 60 percent) and perform fewer tasks (61 versus 169). Seven of the nine members indicated their work area as the base photo lab. Common tasks performed by these personnel include:

- inspect processor pumps or filters
- isolate malfunctions in electrical systems
- inspect print dryers
- connect or disconnect plumbing
- connect or disconnect heat exchange devices
- connect or disconnect water mixing valves

Having an average time in service of only 27 months, these personnel are the most junior in the study. Average grade for the group was E-3, with none of the personnel reporting that they supervise others. As might

be expected from the limited nature of the job, only 56 percent of these personnel felt their talents were utilized fairly well or better. Job satisfaction, however, was not as low, with 78 percent finding their job interesting.

**IX. MOBILITY LABORATORY MAINTENANCE PERSONNEL (GRP052).** The seven members of this independent job type are largely responsible for maintaining mobile facilities, primarily at overseas locations. For the most part, group members did not specialize in any single type of mobile facility; rather, they worked with several different facilities. These primarily include the WS-430 mobile facility (57 percent) and the ES-85 mobile facility (29 percent). Typical tasks performed by these incumbents include:

- position relocatable facilities
- maintain leveling jack heights
- level relocatable facilities
- locate part or stock numbers
- inspect hydraulic systems on transporters
- inspect mechanical brakes on transporters
- secure relocatable facility equipment for transportation

Performing an average of 65 tasks, most of these members were fairly experienced, having an average of 98 months in the career field and an average paygrade of E-5. Only 14 percent were in their first enlistment. Job satisfaction for these incumbents was also quite high (see Table 9).

**X. AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP032).** The six members of this independent job type specialize in maintaining audiovisual equipment and multimedia sound equipment, primarily at base photo labs and audiovisual libraries. Common tasks include:

- clean and lubricate slide projectors
- adjust slide projectors
- inspect sound motion picture projectors
- isolate malfunctions in slide projectors
- adjust sound motion picture projectors

Performing an average of 137 tasks, these exclusively CONUS personnel were fairly junior incumbents, averaging only 37 months in the career field. Average paygrade was 3.7. However, job satisfaction with their work was high. All six members reported their job as being interesting and their talents and training as being utilized at least fairly well.

**XI. MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL (GRP028).** This independent job type is composed of nine members who specialize in working with motion picture cameras. Seven of the nine also reported maintaining aerial cameras. Although a few isolated individuals throughout the career ladder structure indicated maintaining aerial cameras, this was the only group where this maintenance was common across most members. Common tasks performed by this group include:

- perform operational checks on film takeup assemblies
- inspect housings
- clean and lubricate film takeup-assemblies
- adjust film takeup assemblies
- inspect external magazines

Averaging only 29 months in the service, this was the second most junior group in the career ladder structure. All members were stationed in the CONUS, and performed an average of 107 tasks. All members found their job interesting; however, possibly due to work on aerial cameras, only 56 percent felt that their training was being utilized at least fairly well or better.

#### Summary

Overall, the 404X0 career ladder was found to be fairly heterogeneous. Seven major technical areas were identified which related primarily to equipment maintained. These included: (1) still cameras, (2) processors, (3) printers, (4) audiovisual equipment, (5) mobile facilities, (6) motion picture cameras, and (7) aerial cameras. Most of these areas had a group of personnel whose primary function was the maintenance of this equipment; however, many incumbents also worked in other areas as well. Thus, based on this analysis, the present classification structure is well supported by the survey data.

TABLE 4  
RELATIVE PERCENT TIME SPENT ON DUTIES BY CLUSTERS

DUTIES	SUPERVISORS (N=19)	CAMERA MAINTENANCE PERSONNEL (N=50)	PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/ PRINTER		MAINTENANCE PERSONNEL (N=107)
			PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL MAINTENANCE PERSONNEL (N=31)	PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/ PRINTER	
A ORGANIZING AND PLANNING	20	1	1	1	2
B DIRECTING AND IMPLEMENTING	23	2	2	2	3
C INSPECTING AND EVALUATING	20	1	1	1	2
D TRAINING	9	2	*	*	2
E PERFORMING ADMINISTRATIVE AND SUPPORT FUNCTIONS	19	6	9	9	9
F INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	2	8	15	20	
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	4	19	30	40	
H MAINTAINING PRINTER SYSTEMS	*	5	9	12	
I MAINTAINING STILL CAMERA SYSTEMS	*	21	5	1	
J MAINTAINING MOTION PICTURE CAMERA SYSTEMS	*	10	1	*	
K MAINTAINING GENERAL CAMERA EQUIPMENT	*	12	7	1	
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	1	12	19	1	
M MAINTAINING MOBILITY LABORATORIES	1	1	7	7	

\* DENOTES LESS THAN ONE PERCENT

TABLE 5  
RELATIVE PERCENT TIME SPENT ON DUTIES BY INDEPENDENT JOB TYPES

DUTIES	JUNIOR PHOTOGRAPHIC SUPPORT			AUDIOVISUAL EQUIPMENT MAINTENANCE			MOTION PICTURE/ AERIAL CAMERA MAINTENANCE		
	QUALITY CONTROLS (N=6)	INSTRUCTORS (N=5)	MAINTENANCE SCHEDULERS (N=5)	MOBILITY LABORATORY MAINTENANCE PERSONNEL (N=7)	AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (N=6)	MOTION PICTURE/ AERIAL CAMERA MAINTENANCE PERSONNEL (N=9)			
A ORGANIZING AND PLANNING	9	7	10	*	2	1	*	*	*
B DIRECTING AND IMPLEMENTING	9	13	34	*	1	2	*	*	*
C INSPECTING AND EVALUATING	14	1	7	*	1	*	*	*	*
D TRAINING	5	43	4	*	1	*	*	*	*
E PERFORMING ADMINISTRATIVE AND SUPPORT FUNCTIONS	20	12	45	5	14	5	3	3	
F INSPECTING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	2	5	*	34	27	1	1	1	
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	11	7	*	45	20	4	1	1	
H MAINTAINING PRINTER SYSTEMS	4	*	*	15	*	1	*	*	
I MAINTAINING STILL CAMERA SYSTEMS	10	*	*	*	*	6	6	6	
J MAINTAINING MOTION PICTURE CAMERA SYSTEMS	7	*	*	*	*	1	1	1	
K MAINTAINING GENERAL CAMERA EQUIPMENT	4	*	*	*	*	16	16	14	
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	5	9	*	*	63	4	4	4	
M MAINTAINING MOBILITY LABORATORIES	*	2	*	*	33	63	4	*	

\* DENOTES LESS THAN ONE PERCENT

TABLE 6  
BACKGROUND INFORMATION FOR CLUSTERS

	SUPERVISORS	MAINTENANCE PERSONNEL	CAMERA MAINTENANCE PERSONNEL	PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL	PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL
NUMBER IN GROUP	19	50	31	107	107
PERCENT OF SAMPLE	7%	18%	11%	38%	38%
PERCENT LOCATED OVERSEAS	32%	36%	16%	47%	47%
DAFSC DISTRIBUTION					
40430	0%	16%	22%	8%	8%
40450	26%	68%	68%	73%	73%
40470	42%	16%	10%	19%	19%
40499	27%	0%	0%	0%	0%
CEM CODE 40400	5%	0%	0%	0%	0%
AVERAGE GRADE	6.5	4.2	3.9	4.3	4.3
AVERAGE TIME IN CAREER FIELD (MONTHS)	160	74	52	66	66
AVERAGE TIME IN SERVICE (MONTHS)	188	87	64	82	82
PERCENT IN FIRST ENLISTMENT	16%	38%	55%	42%	42%
PERCENT SUPERVISING	74%	26%	7%	39%	39%
AVERAGE NUMBER OF TASKS PERFORMED	64	291	137	169	169
AVERAGE TASK DIFFICULTY PER UNIT OF TIME					
SPENT (ATDPUTS)	5.3	4.9	4.6	4.7	4.7
JOB DIFFICULTY INDEX (JDI)	12.5	18.2	11.5	13.5	13.5

TABLE 7  
BACKGROUND INFORMATION FOR INDEPENDENT JOB TYPES

QUALITY CONTROL NCOICs	INSTRUCTORS	MAINTENANCE		MOBILITY		AUDIOVISUAL		MOTION PICTURE/ AERIAL CAMERA	
		SCHEDULERS	PERSONNEL	PROCESSOR/PRINTER	LABORATORY	MAINTENANCE	EQUIPMENT	MAINTENANCE	PERSONNEL
NUMBER IN GROUP									
6	5	5	9						
PERCENT OF SAMPLE	2%	2%	3%						
PERCENT LOCATED OVERSEAS	50%	0%	22%						
<hr/>									
DAFSC DISTRIBUTION									
40430	0%	0%	0%	11%	14%	17%	56%	83%	44%
40450	0%	0%	100%	89%	72%	0%	0%	0%	0%
40470	100%	100%	0%	0%	14%	0%	0%	0%	0%
40499	0%	0%	0%	0%	0%	0%	0%	0%	0%
CEM CODE 40400	0%	0%	0%	0%	0%	0%	0%	0%	0%
<hr/>									
AVERAGE GRADE	6.3	5.4	4.6	3.0					
AVERAGE TIME IN CAREER							3.7	3.6	
FIELD (MONTHS)	180	99	87	19	98	37			14
AVERAGE TIME IN SERVICE (MONTHS)	193	160	103	27	117	49	29	29	
PERCENT IN FIRST ENLISTMENT	0%	0%	0%	89%	14%	67%	79%	79%	
<hr/>									
PERCENT SUPERVISING	67%	40%	0%	0%	14%	17%			22%
<hr/>									
AVERAGE NUMBER OF TASKS PERFORMED	122	51	16	61	65	137	107		
AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT (ATDPUTS)	4.9	5.2	5.0	4.7	4.7	4.9	5.1		
JOB DIFFICULTY INDEX (JDI)	12.7	11.0	6.7	8.3	8.2	13.7	13.1		

TABLE 8  
JOB SATISFACTION AND RELATED DATA FOR CLUSTERS  
(PERCENT MEMBERS RESPONDING)

	<u>SUPERVISORS</u>	<u>CAMERA MAINTENANCE PERSONNEL</u>	<u>PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL</u>	<u>PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL</u>
<u>I FIND MY JOB:</u>				
DULL	5	2	16	8
SO-SO	11	8	23	21
INTERESTING	84	88	61	71
<u>MY JOB UTILIZES MY TALENTS:</u>				
NOT AT ALL TO VERY LITTLE	16	12	35	27
FAIRLY WELL OR BETTER	84	88	65	73
<u>MY JOB UTILIZES MY TRAINING:</u>				
NOT AT ALL TO VERY LITTLE	11	16	32	29
FAIRLY WELL OR BETTER	84	80	68	71

NOTE: COLUMNS DO NOT ADD UP TO 100% DUE TO "NO RESPONSE"

TABLE 9  
JOB SATISFACTION AND RELATED DATA FOR INDEPENDENT JOB TYPES  
(PERCENT MEMBERS RESPONDING)

		JUNIOR PHOTO- GRAPHIC SUPPORT			AUDIOVISUAL EQUIPMENT			MOTION PICTURE/ AERIAL CAMERA MAINTENANCE		
		SYSTEMS AND PROCESSOR/PRINTER			LABORATORY			MAINTENANCE		
		MAINTENANCE PERSONNEL			MAINTENANCE			PERSONNEL		
QUALITY CONTROL NCOICs	INSTRUCTORS	MAINTENANCE SCHEDULERS								
<u>I FIND MY JOB:</u>										
DULL	0	0	0	11	0	0	0	0	0	0
SO-SO	17	0	20	11	0	0	0	0	0	0
INTERESTING	66	100	80	78	86	100	100	100	100	100
<u>MY JOB UTILIZES MY TALENTS:</u>										
NOT AT ALL TO VERY LITTLE	17	20	40	44	14	22	22	22	22	22
FAIRLY WELL OR BETTER	83	80	60	56	86	100	100	100	100	100
<u>MY JOB UTILIZES MY TRAINING:</u>										
NOT AT ALL TO VERY LITTLE	33	0	60	11	0	0	0	0	44	44
FAIRLY WELL OR BETTER	67	100	40	89	100	100	100	100	56	56

NOTE: COLUMNS DO NOT ADD UP TO 100 PERCENT DUE TO "NO RESPONSE"

## ANALYSIS OF DAFSC GROUPS

As personnel progress in a career ladder, many times the job they perform changes. An analysis of the DAFSC groups and a comparison of these groups with the career ladder structure can reveal many of these possible changes. This information can then be compared to career ladder documents such as the AFR 39-1 specialty descriptions and the Specialty Training Standard (STS) in order to measure their accuracy.

Table 10 presents the relative percent time spent on duties by skill level groups. As is the case in most career ladders, the management, supervision, and training duties (A, B, C, and D) accounted for increasing proportions of time with skill level advancement. Lower skill level personnel tended to spend more time on the technical aspects of the job, with the 7-skill level personnel providing a smooth transition by spending time in both the technical and supervisory areas.

Advancement in skill level in the 404X0 career ladder also tended to be correlated with time spent on the various equipment maintained. As shown in Table 10, 3-skill level personnel spend more time maintaining still and motion picture cameras than any other skill level group. Five-skill level personnel spent more time performing maintenance on processors and mobility laboratory equipment. However, these percentages may be misleading. Considering the substantially larger number of 5-skill level personnel as compared to other DAFSCs, the jobs performed by 3-skill level incumbents may well be a matter of filling the needs of the career ladder at the time and not a case of changing the equipment maintained with advancement in skill levels.

### Skill Level Descriptions

DAFSC 40430. Three-skill level personnel performed an almost exclusively technical job, spending 88 percent of their time on technical tasks. The largest percent of their time (29 percent) was spent maintaining photographic support systems. However, 3-skill level individuals also spent the most time of any DAFSC in the maintenance of still, motion picture, and general camera equipment.

In terms of job group distribution (see Table 11), 3-skill level personnel were primarily found in the Photographic Support Systems and Processor/Printer Maintenance Personnel cluster (25 percent), the Camera Maintenance Personnel cluster (22 percent), and the Photographic Support Systems and Audiovisual Equipment Maintenance Personnel cluster (19 percent).

Table 12 presents representative tasks performed by 3-skill level personnel. Performance of maintenance tasks involving adjusting, inspecting, and isolating malfunctions was typical of the technical tasks listed. As the table illustrates, the task with the highest percentage of 3-skill level members performing had only 72 percent of the members performing it. This highlights the fact that 40430 personnel do not have much of a common core of tasks performed by almost all members; rather, different areas of maintenance emphasis require somewhat different tasks among incumbents.

DAFSC 40450. Five-skill level personnel performed a job similar to that performed by 3-skill level airmen (see Table 13 for a list of representative tasks). However, 5-skill level members performed more supervision and administrative tasks. Emphasis of the 5-skill level job was more in the areas of processor, support systems, and mobility laboratory maintenance and performing administrative functions (see Table 10).

As Table 11 illustrates, the greatest concentration of 5-skill level personnel was in the Photographic Support Systems and Processor/Printer Maintenance Personnel cluster (44 percent). However, 5-skill level respondents were found across most of the job groups. Other major job groups of 5-skill level members included the Camera Maintenance Personnel, and Photographic Support Systems and Audiovisual Equipment Maintenance Personnel clusters which contained 19 percent and 12 percent respectively of all 5-skill level personnel. In addition, all but one member of the Audiovisual Equipment Maintenance Personnel independent job type was a 5-skill level incumbent and all of the Maintenance Schedulers independent job type was 5-skill level personnel.

Table 14 lists those tasks which best differentiate 3- and 5-skill level personnel. As illustrated, a higher percentage of 3-skill level personnel maintained camera equipment than 5-skill level incumbents, while a somewhat higher percentage of 5-skill levels performed processor maintenance tasks. In addition, the job of a 5-skill level incumbent was much broader, performing an average of 165 tasks as compared to an average of 131 for 40430 incumbents.

DAFSC 40470. At the 7-skill level, the job was still largely technical in nature, with over 50 percent of the total job time spent on technical functions (see Table 10). However, the most common tasks being performed were largely supervisory and administrative in nature (see Table 15).

In terms of job groups, 7-skill level respondents were found across many groups, both supervisory and technical (see Table 11). Over a third were found in the Photographic Support Systems and Processor/Printer Maintenance Personnel cluster. In addition, the Camera Maintenance Personnel cluster and the Supervisors cluster each contained 14 percent of all 7-skill levels. Also, the Quality Control NCOIC and Instructors independent job types were exclusively 7-skill level.

As depicted in Table 16, those tasks which best differentiated 5-skill level personnel from the 7-skill level personnel reflected more managerial and supervisory tasks for the 7-skill level personnel and more technical tasks, especially processor maintenance, for the 5-skill level incumbents.

DAFSC 40499 and CEM Code 40400. These individuals performed exclusively supervisory, managerial, and administrative functions (see Table 17 for a list of representative tasks). None of these individuals reported performing technical aspects of the job to any noticeable degree. Table 10 reveals the obvious lack of time spent by these individuals on any technical aspect of the job. Only one percent of their time was spent in technical duties; however, this time was diffused across all duties. The difference

between these incumbents and the 7-skill level personnel is the total supervisory and higher management job of the 9- and CEM Code skill level personnel whereas the 7-skill level personnel still perform technical tasks to a substantial degree.

Only one major career ladder structure grouping contained these individuals: the Supervisors cluster (see Table 11). Six of the seven incumbents grouped here and one incumbent did not group in any identifiable cluster or independent job type. Consequently, as could be expected, these members are the higher level managers and supervisors of the career ladder.

#### Summary

The DAFSC analysis reveals a heterogeneous career ladder, with the lower skill level personnel (3- and 5-skill levels) performing primarily technical tasks, the 7-skill level personnel providing both technical and supervisory tasks almost equally, and the 9-skill level and CEM code personnel performing exclusively supervisory and higher managerial tasks. Three-skill level personnel spend more time maintaining camera equipment than any other DAFSC and 5-skill level personnel spend more time maintaining processors and mobile facilities than the other DAFSCs. Seven-skill level personnel perform diverse technical tasks involving a spectrum of equipment, and 40499/00 personnel do not work with precision imagery and audiovisual media equipment to any appreciable extent.

TABLE 10  
RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	DAFSC 40430 PERSONNEL (N=36)	DAFSC 40450 PERSONNEL (N=179)	DAFSC 40470 PERSONNEL (N=57)	DAFSC 40499 OR CEM CODE PERSONNEL (N=7)
A ORGANIZING AND PLANNING	*	2	7	25
B DIRECTING AND IMPLEMENTING	2	4	10	28
C INSPECTING AND EVALUATING	*	2	7	29
D TRAINING	*	2	10	3
E PERFORMING ADMINISTRATIVE FUNCTIONS	9	11	14	14
F INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	12	16	9	*
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	29	29	21	*
H MAINTAINING PRINTER SYSTEMS	7	8	6	*
I MAINTAINING STILL CAMERA SYSTEMS	10	5	5	*
J MAINTAINING MOTION PICTURE CAMERAS	12	4	2	*
K MAINTAINING GENERAL CAMERA EQUIPMENT	7	4	3	*
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	9	8	4	*
M MAINTAINING MOBILITY LABORATORIES	2	5	2	*

\* DENOTES LESS THAN ONE PERCENT

TABLE 11  
DISTRIBUTION BY JOB GROUP FOR EACH DUTY AFSC

JOB GROUPS	DAFSC 40430 PERSONNEL	DAFSC 40450 PERSONNEL	DAFSC 40470 PERSONNEL	DAFSC 40499 AND CEM CODE PERSONNEL
SUPERVISORS	-	5	8	6
QUALITY CONTROL NCOICs	-	-	6	-
INSTRUCTORS	-	-	5	-
MAINTENANCE SCHEDULERS	-	5	-	-
CAMERA MAINTENANCE	8	34	8	-
SUPPORT SYSTEMS AND AUDIOVISUAL MAINTENANCE	7	21	3	-
SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE	9	78	20	-
JUNIOR SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE	1	8	-	-
MOBILITY LABORATORY MAINTENANCE	1	5	1	-
AUDIOVISUAL MAINTENANCE	1	5	-	-
MOTION PICTURE/AERIAL CAMERA MAINTENANCE	5	4	-	-
NOT GROUPED	4	14	6	1
TOTAL	36	179	57	7

TABLE 12  
REPRESENTATIVE TASKS PERFORMED BY DAFSC 40430 PERSONNEL

<u>TASKS</u>	<u>PERCENT OF 3-SKILL LEVEL PERFORMING (N=36)</u>
E105 LOCATE PART OR STOCK NUMBERS	72
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	67
G234 INSPECT PRINT DRYERS	67
F162 INSPECT PROCESSORS	64
G202 ADJUST PRINT DRYERS	61
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	61
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	58
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	58
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	58
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	58
G235 INSPECT PRINT WASHERS	58
G243 INSPECT TIMERS	56
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	56
E104 ATTACH EQUIPMENT STATUS TAGS	56
G236 INSPECT PROCESSOR PUMPS OR FILTERS	53
G320 PERFORM OPERATIONAL CHECKS ON TIMERS	53
G303 PERFORM OPERATIONAL CHECKS ON DENSITOMETERS	53
G266 ISOLATE MALFUNCTIONS IN SLIDE MOUNTERS	50
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	50
G238 INSPECT SINKS	50
G195 ADJUST DENSITOMETERS	50
H373 INSPECT MANUAL CONTACT PRINTERS	50
G227 INSPECT DENSITOMETERS	50
H363 ADJUST MANUAL CONTACT PRINTERS	50
H390 PERFORM OPERATIONAL CHECKS ON PROJECTION PRINTERS	50

TABLE 13  
REPRESENTATIVE TASKS PERFORMED BY DAFSC 40450 PERSONNEL

TASKS	PERCENT OF 5-SKILL LEVEL PERFORMING (N=179)
F162 INSPECT PROCESSORS	78
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	78
E105 LOCATE PART OR STOCK NUMBERS	75
G234 INSPECT PRINT DRYERS	73
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	72
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	70
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	69
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	68
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	68
F261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	68
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	67
E104 ATTACH EQUIPMENT STATUS TAGS	67
G236 INSPECT PROCESSOR PUMPS OR FILTERS	67
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	67
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	67
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	66
G195 ADJUST DENSITOMETERS	66
F156 CONNECT OR DISCONNECT WATER MIXING VALVES	66
F168 ISOLATE MALFUNCTIONS IN TEMPERATURE CONTROL SYSTEMS	65
G344 REMOVE OR REPLACE PROCESSOR PUMP OR FILTER COMPONENTS	65
G345 REMOVE OR REPLACE PROCESSOR PUMPS OR FILTERS	64
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	63
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	63
G340 REMOVE OR REPLACE PRINT DRYER COMPONENTS	63
G235 INSPECT PRINT WASHERS	63

TABLE 14  
TASKS WHICH BEST DIFFERENTIATE DAFSC 40430 AND 40450 PERSONNEL

TASKS	PERCENT OF 3-SKILL LEVEL PERSONNEL PERFORMING	PERCENT OF 5-SKILL LEVEL PERSONNEL PERFORMING	DIFFERENCE	
			+	-
K633 INSPECT LENSES	47	26	+21	
I402 ADJUST BETWEEN-THE-LENS SHUTTERS	44	27	+17	
K627 CLEAN LENSES	44	27	+17	
I459 ISOLATE MALFUNCTIONS IN FLASH SYNCHRONIZATION MECHANISMS	33	17	+16	
K630 CLEAN MIRRORS	44	28	+16	
I407 ADJUST FOCAL PLANE SHUTTERS	33	18	+15	
I416 CLEAN AND LUBRICATE APERTURES	36	21	+15	
I406 ADJUST FLASH SYNCHRONIZATION MECHANISMS	30	16	+14	
I441 INSPECT FOCAL PLANE SHUTTERS	33	20	+13	
I438 INSPECT FILM ADVANCE MECHANISMS	36	23	+13	
G266 ISOLATE MALFUNCTIONS IN SLIDE MOUNTERS	50	39	+11	
K626 CLEAN LENS ASSEMBLIES	36	26	+10	
F145 CALIBRATE SPEED CONTROL INDICATORS	17	51	-35	
G344 REMOVE OR REPLACE PROCESSOR PUMP OR FILTER COMPONENTS	33	65	-32	
F186 REMOVE OR REPLACE PROCESSOR SYSTEMS	22	54	-32	
F151 CONNECT OR DISCONNECT HEAT EXCHANGE DEVICES	22	54	-32	
G345 REMOVE OR REPLACE PROCESSOR PUMPS OR FILTERS	22	54	-32	
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	33	64	-31	
F156 CONNECT OR DISCONNECT WATER MIXING VALVES	36	66	-30	
D81 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	36	66	-30	
G256 ISOLATE MALFUNCTIONS IN HYDROMIXERS	3	32	-29	
F186 REMOVE OR REPLACE DRIVE SYSTEM COMPONENTS	33	61	-28	
F190 REMOVE OR REPLACE SILVER RECOVERY KITS	28	55	-27	
A5 DETERMINE WORK PRIORITIES	22	49	-27	
	17	44	-27	

TABLE 15  
REPRESENTATIVE TASKS PERFORMED BY DAFSC 40470 PERSONNEL

TASKS	PERCENT OF 7-SKILL LEVEL PERFORMING (N=57)
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	86
E105 LOCATE PART OR STOCK NUMBERS	74
A5 DETERMINE WORK PRIORITIES	72
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	70
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	67
E106 MAINTAIN MAINTENANCE RECORD FILES	67
F162 INSPECT PROCESSORS	65
C67 PREPARE APRs	61
B47 WRITE CORRESPONDENCE	61
E107 MAINTAIN TECHNICAL ORDER (TO) OR COMMERCIAL PUBLICATION FILES	61
E115 MAKE ENTRIES ON ISSUE/TURN IN REQUESTS FORMS (AFTO FORM 2005)	61
E104 ATTACH EQUIPMENT STATUS TAGS	61
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	60
D81 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	58
B37 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	58
G234 INSPECT PRINT DRYERS	58
G243 INSPECT TIMERS	58
B44 SUPERVISE PRECISION IMAGERY AND AUDIOVISUAL MEDIA MAINTENANCE SPECIALISTS (AFSC 40450)	56
C54 EVALUATE CORROSION CONTROL PROGRAMS	56
A16 PLAN WORK ASSIGNMENTS	56
G227 INSPECT DENSITOMETERS	56
A7 DEVELOP WORK METHODS OR PROCEDURES	54
F175 PERFORM ACCEPTANCE CHECKS ON PHOTOGRAPHIC EQUIPMENT	54
H373 INSPECT MANUAL CONTACT PRINTERS	54
G235 INSPECT PRINT WASHERS	54

TABLE 16

## TASKS WHICH BEST DIFFERENTIATE DAFSC 40450 AND 40470 PERSONNEL

TASKS	PERCENT OF 5-SKILL LEVEL PERSONNEL PERFORMING		PERCENT OF 7-SKILL LEVEL PERSONNEL PERFORMING		DIFFERENCE
	67	35	30	33	
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	67	35	30	33	+32
G282 PERFORM CORROSION CONTROL ON HYDROMIXERS	61	30	31	31	+31
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	63	33	33	30	+30
G340 REMOVE OR REPLACE PRINT DRYER COMPONENTS	63	33	33	30	+30
G345 REMOVE OR REPLACE PROCESSOR PUMPS OR FILTERS	64	35	29	29	+29
G219 CLEAN AND LUBRICATE HYDROMIXERS	58	30	28	28	+28
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	68	40	28	28	+28
F148 CONNECT OR DISCONNECT CHEMICAL CONTROL FLOWRATES	56	28	27	27	+27
F151 CONNECT OR DISCONNECT HEAT EXCHANGE DEVICES	53	26	27	27	+27
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	64	37	27	27	+27
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	70	44	26	26	+26
G344 REMOVE OR REPLACE PROCESSOR PUMP OR FILTER COMPONENTS	65	39	26	26	+26
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	26	70	-44	-44	-44
B47 WRITE CORRESPONDENCE	20	61	-41	-41	-41
C67 PREPARE APRs	23	61	-38	-38	-38
A20 SCHEDULE LEAVES OR PASSES	12	49	-37	-37	-37
D75 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	8	45	-37	-37	-37
B36 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	16	52	-36	-36	-36
A3 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	8	44	-36	-36	-36
B44 SUPERVISE PRECISION IMAGERY AND AUDIOVISUAL MEDIA MAINTENANCE SPECIALISTS (AFSC 40450)	21	56	-35	-35	-35
C54 EVALUATE CORROSION CONTROL PROGRAMS	22	56	-34	-34	-34
D97 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	17	51	-34	-34	-34
D80 COUNSEL TRAINEES ON TRAINING PROGRESS	16	49	-33	-33	-33
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	16	49	-33	-33	-33

TABLE 17  
REPRESENTATIVE TASKS PERFORMED BY DAFSC  
40499 AND CEM CODE 40400 PERSONNEL

<u>TASKS</u>	<u>PERCENT OF 9- SKILL LEVEL AND CEM CODE 40400 PERFORMING (N=7)</u>
B47 WRITE CORRESPONDENCE	100
B23 CONDUCT STAFF MEETINGS	100
B35 INITIATE PERSONNEL ACTION REQUESTS	100
A1 ACT AS TRAINING ADVISOR AT STAFF LEVEL	100
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	86
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	86
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	86
C58 EVALUATE MAINTENANCE MANAGEMENT OF SUBORDINATE OFFICES OR SUPPLIES	86
C49 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	86
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	86
C56 EVALUATE INSPECTION REPORTS OR PROCEDURES	86
B46 UPDATE LOCAL OPERATING INSTRUCTIONS	86
A17 PREPARE JOB DESCRIPTIONS	86
C73 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	71
B36 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	71
A3 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	71
C54 EVALUATE CORROSION CONTROL PROGRAMS	71
C55 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	71
C64 EVALUATE SUGGESTIONS	71
A12 PLAN BRIEFINGS	71
C71 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	71
C50 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	71
B28 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	71
C52 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	57
A18 REVIEW TABLES OF ALLOWANCES	57

## COMPARISON OF AFR 39-1 SPECIALTY DESCRIPTIONS TO SURVEY DATA

A comparison of survey data to the April 1978 404X0 AFR 39-1 specialty descriptions found the present AFR 39-1 to be an accurate representation of the tasks and jobs being performed across the different skill levels. Although some of the jobs and equipment listed in the AFR 39-1 Specialty Descriptions were not used by a majority of the incumbents, the descriptions did give a good representation of the overall spectrum of the job for each skill level. No changes are recommended.

## ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

In addition to analyzing the differences in the job performed across skill level groups, it is also necessary to examine the jobs performed by personnel according to their experience in the career ladder. This is accomplished by comparing the different TAFMS groups - the most extensive analysis being between the first, second, and career enlistment groups.

Table 18 displays the percent time spent on duties by incumbents in the various enlistment groups. As can be seen, with increasing time in the service, more time is spent in the supervisory and managerial areas, but less time is spent in technical areas. Administrative duties tend to peak at the fourth enlistment. This trend is similar to that noted for DAFSC groups and is typical of most career fields.

As revealed in Table 19, the more junior personnel are concentrated in the Photographic Support Systems and Processor/Printer Maintenance Personnel cluster (39 percent), the Camera Maintenance cluster (17 percent), and the Photographic Support Systems and Audiovisual Equipment Maintenance cluster (15 percent). The Junior Photographic Support Systems and Processor/Printer Maintenance Personnel independent job type is comprised almost exclusively of first enlistment personnel. More senior personnel did not show any noticeable trends, as they tended to spread out over both technical and supervisory job groups. Those with over 240 months TAFMS were almost exclusively found in supervisory job groups.

Table 30 in the Equipment Section of this report provides a more complete listing of the equipment maintained by 404X0 personnel according to their experience level. In conjunction with the present TAFMS analysis, this information could be of use to training officials.

### First Enlistment Personnel

Individuals in their first enlistment (1-48 months TAFMS) performed an almost totally technical maintenance job, with less than five percent of their job time being spent on supervisory functions (see Table 18). Common tasks performed by these personnel (see Table 20) were concentrated in the areas

of processor and support systems maintenance. However, first enlistment incumbents also reported working on the full spectrum of equipment in the field (see Table 21). TAC, SAC, and MAC had the largest concentrations of first enlistment personnel. Only 19 percent of the 1-48 months TAFMS group reported assignments overseas. Figure 2 displays the distribution of first enlistment personnel across the major job groups.

#### Job Satisfaction Analysis

Indices of job satisfaction were also examined for 404X0 first, second, and career enlistment groups. These data were compared with job satisfaction data from a group of Mission Equipment Maintenance personnel who were surveyed in 1980. As Table 22 shows, for all enlistment groups, 404X0 personnel found their job more interesting and their talents better utilized. Reported satisfaction with training for both the 404X0 and the comparative personnel were similar.

In summary, it can be said that first enlistment personnel perform a mostly technical job concerned with equipment maintenance. As experience level increases, more time is spent in managerial and supervisory areas. In general, 404X0 personnel find their job more interesting and their talents better utilized than personnel in similar career fields.

TABLE 18  
RELATIVE PERCENT TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	MONTHS TAFMS					
	1-48 (N=115)	49-96 (N=47)	97-144 (N=50)	145-192 (N=36)	193-240 (N=19)	241+ (N=10)
A ORGANIZING AND PLANNING	1	3	4	7	7	20
B DIRECTING AND IMPLEMENTING	2	5	4	10	10	23
C INSPECTING AND EVALUATING	*	2	2	8	5	23
D TRAINING	*	2	6	6	12	4
E PERFORMING ADMINISTRATIVE FUNCTIONS	8	13	11	19	14	12
F INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	15	16	15	7	10	4
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	32	27	27	18	21	7
H MAINTAINING PRINTER SYSTEMS	9	9	7	6	5	1
I MAINTAINING STILL CAMERA SYSTEMS	7	4	5	5	4	3
J MAINTAINING MOTION PICTURE CAMERA SYSTEMS	7	5	3	2	*	*
K MAINTAINING GENERAL CAMERA EQUIPMENT	6	3	3	4	3	1
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	8	7	7	5	6	1
M MAINTAINING MOBILITY LABORATORIES	5	3	5	3	3	1

\* DENOTES LESS THAN ONE PERCENT

TABLE 19  
DISTRIBUTION BY JOB GROUPS FOR EACH ENLISTMENT GROUP  
(NUMBER MEMBERS RESPONDING)

JOB GROUPS	MONTHS IN SERVICE					
	1-48 (N=115)	49-96 (N=47)	97-144 (N=50)	145-192 (N=36)	193-240 (N=19)	241+ (N=19)
SUPERVISORS (GRP033)	3	0	1	6	2	7
QUALITY CONTROL NCOICs (GRP056)	0	0	1	4	0	1
INSTRUCTORS (GRP039)	0	0	3	0	2	0
MAINTENANCE SCHEDULERS (GRP036)	1	2	0	2	0	0
CAMERA MAINTENANCE PERSONNEL (GRP041)	19	9	11	7	3	0
PHOTOTGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE (GRP045)	17	5	7	0	2	0
PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP040)	45	22	21	11	6	2
PHOTOGRAPHIC JUNIOR SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP031)	8	1	0	0	0	0
MOBILITY LABORATORY MAINTENANCE PERSONNEL (GRP052)	1	1	3	1	1	0
AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP032)	4	1	1	0	0	0
MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL (GRP028)	7	2	0	0	0	0
NOT GROUPED	10	4	2	5	3	0
TOTAL	115	47	50	36	19	10

TABLE 20

REPRESENTATIVE TASKS PERFORMED BY 404X0 FIRST ENLISTMENT  
 (1-48 MONTHS TAFMS) PERSONNEL  
 (N=115)

TASKS	PERCENT MEMBERS PERFORMING
G234 INSPECT PRINT DRYERS	75
F162 INSPECT PROCESSORS	72
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	72
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	69
G202 ADJUST PRINT DRYERS	68
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	68
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	68
E105 LOCATE PART OR STOCK NUMBERS	67
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	67
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	66
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	64
G195 ADJUST DENSITOMETERS	64
G236 INSPECT PROCESSOR PUMPS OR FILTERS	63
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	63
G235 INSPECT PRINT WASHERS	63
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	63
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	62
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	60
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	60
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	60

TABLE 21  
BACKGROUND INFORMATION FOR FIRST ENLISTMENT PERSONNEL

AVERAGE NUMBER OF TASKS PERFORMED	145
AVERAGE PAYGRADE	E-3
<hr/>	
PERCENT IN MAJOR COMMANDS:	
TAC	28%
MAC	20%
SAC	20%
ATC	14%
USAFE	10%
PACAF	4%
<hr/>	
PERCENT MAINTAINING PHOTOGRAPHIC SUPPORT EQUIPMENT	90%
PERCENT MAINTAINING PROCESSORS	87%
PERCENT MAINTAINING PRINTERS	85%
PERCENT MAINTAINING PHOTOGRAPHIC EDITING EQUIPMENT	71%
PERCENT MAINTAINING COPY CAMERAS	59%
PERCENT MAINTAINING AUDIOVISUAL EQUIPMENT	57%
PERCENT MAINTAINING MANUAL DENSITOMETERS	50%
PERCENT MAINTAINING STILL CAMERAS	49%
PERCENT MAINTAINING MOBILE FACILITIES	39%
PERCENT MAINTAINING MOTION PICTURE CAMERAS	37%
PERCENT MAINTAINING AERIAL CAMERAS	16%
PERCENT MAINTAINING AUTOMATIC DENSITOMETERS	12%
<hr/>	
PRESENTLY ASSIGNED TO DAVA OR AAVS	28%
PERCENT ASSIGNED OVERSEAS	19%
PERCENT SUPERVISING OTHERS	6%

FIGURE 2  
DISTRIBUTION OF FIRST ENLISTMENT PERSONNEL IN SAMPLE ACROSS  
CAREER LADDER JOBS

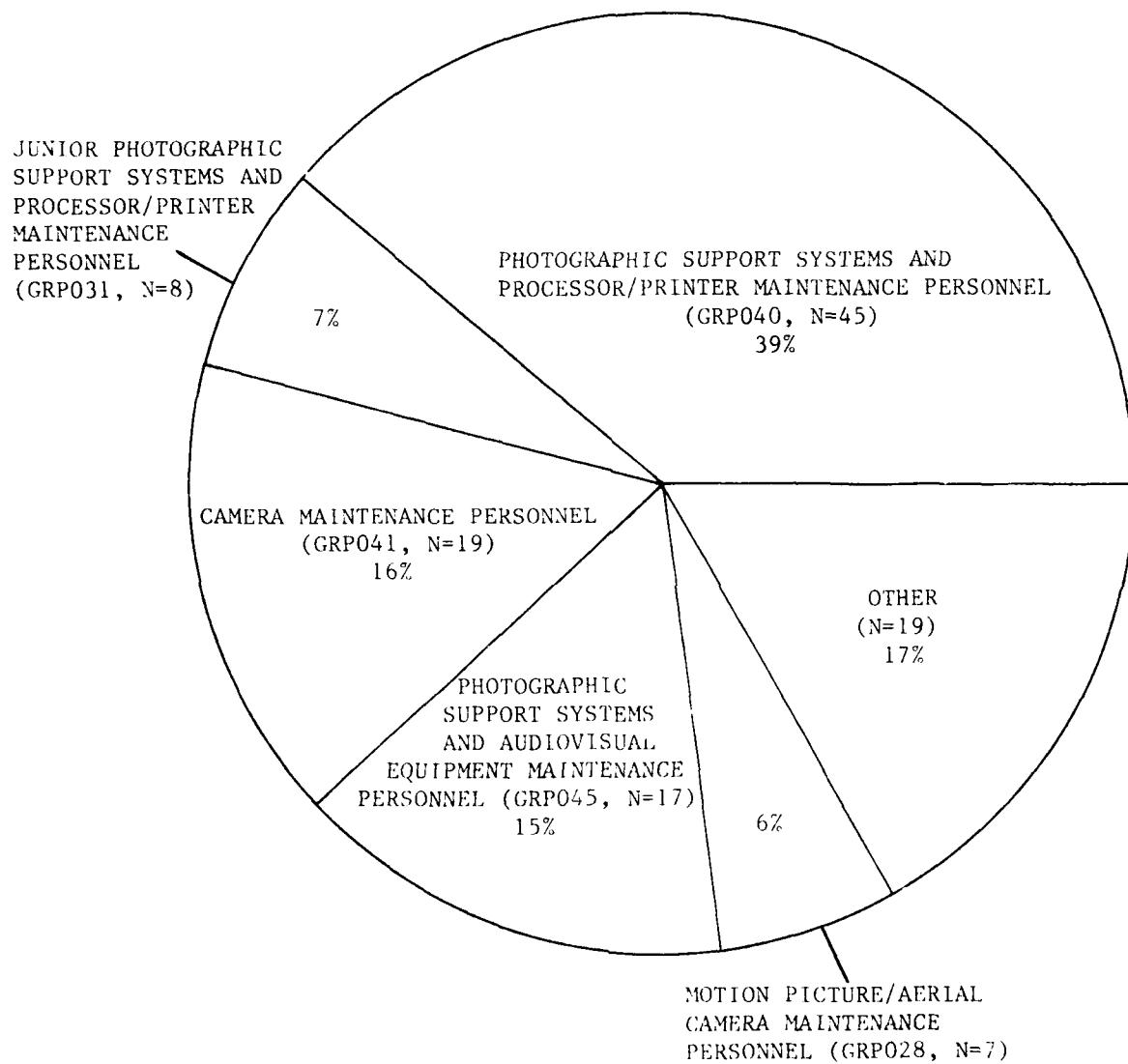


TABLE 22  
JOB SATISFACTION INDICES FOR FIRST ENLISTMENT, SECOND ENLISTMENT, AND CAREER 404X0 GROUPS  
(PERCENT MEMBERS RESPONDING)

	FIRST ENLISTMENT 404X0 (N=115)	COMPARATIVE* SAMPLE (N=1,374)	SECOND ENLISTMENT 404X0 (N=47)	COMPARATIVE* SAMPLE (N=853)	CAREER 404X0 (N=115)	COMPARATIVE* SAMPLE (N=1,426)
<u>I FIND MY JOB:</u>						
DULL	9	24	9	17	5	14
SO-SO	21	20	19	22	7	16
INTERESTING	70	56	72	61	85	70
NO RESPONSE	0	0	0	0	3	0
<u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	30	37	21	31	18	24
FAIRLY WELL OR BETTER	70	58	79	69	82	76
NO RESPONSE	0	5	0	0	0	0
<u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	27	30	30	29	19	25
FAIRLY WELL OR BETTER	73	70	70	71	78	75
NO RESPONSE	0	0	0	0	3	0

\*COMPARATIVE SAMPLE INCLUDES PERSONNEL FROM A NUMBER OF SIMILAR MAINTENANCE CAREER FIELDS SURVEYED IN 1980  
(INCLUDES AFSC's 302X0, 307X0, 308X0, 322X2A/B/C, 427X3; TOTAL COMPARATIVE SAMPLE WAS COMPRISED OF 3,653 RESPONDENTS)

## ANALYSIS OF MAJOR COMMAND DIFFERENCES

Another possible dimension along which the jobs performed by individuals may vary is Major Command (MAJCOM). Consequently, an examination of the tasks and duties performed by incumbents in each major command is necessary to see if differences exist. Five major commands, comprising 90 percent of the 404X0 sample, were examined. These commands were: 1) Air Training Command (ATC); 2) Military Airlift Command (MAC); 3) Strategic Air Command (SAC); 4) Tactical Air Command (TAC); and 5) United States Air Forces Europe (USAFE). Some notable job differences were discovered between personnel in different major commands.

Tables 23 through 27 at the end of this section provide job and background information for these MAJCOM groups. The reader should refer to these tables when reading the individual MAJCOM narratives which follow. For an overall view of how the jobs vary among MAJCOM groups, Table 23 lists the MAJCOM distribution across the job groups identified in the career ladder structure. Table 24 reflects the relative time spent performing duties by personnel in each MAJCOM. As can be seen, all MAJCOM groups spend substantial time maintaining photographic support systems and performing administrative functions; however, other duty areas provide some differentiation between groups. Further discussion of these differences follows in the specific MAJCOM descriptions. Table 25 reflects a summary of background data for the MAJCOM's involved. Of significant importance on Table 25 is the listing of equipment and the percentage of each MAJCOM's 404X0 members who reported maintaining that equipment. Table 26 lists representative tasks which differentiate the MAJCOM groups. Table 27 aids further in the differentiation by giving job satisfaction data for the major commands and Table 31 in the Equipment section of this report provides a more detailed listing of equipment maintained according to MAJCOM.

### ATC

The 32 personnel in the Air Training Command formed the most heterogeneous group of the five. There was no single set of tasks best describing the job of these individuals. Rather, they performed a wide range of tasks, with usually less than half of the members performing any single task. ATC personnel did concentrate more time on training duties than any other MAJCOM and more time was spent maintaining still and motion picture cameras than any other MAJCOM except MAC. As Table 25 illustrates, the KS-99 Canon still camera, the ME-4 color processor, the Versmat 1811 CM color processor, reel-to-reel tape recorders, public address systems, and motion picture cameras in general were maintained to a substantially greater degree by ATC personnel than any other MAJCOM. It is also important to note that ATC incumbents found their job less interesting than any other major command (see Table 27). None of these individuals were assigned overseas.

### MAC

Fifty-three 404X0 personnel are assigned to this major command and form a moderately homogeneous group, with common tasks performed by a majority of the incumbents. These individuals had the broadest job, with an average number of tasks performed of 195. The diversity of their job is also manifest by the distribution of job time across duties. As Table 24 reveals, MAC personnel do not concentrate their job time in any one duty area; rather, they spend their time across the full spectrum of duties. There is, however, certain equipment maintained which distinguishes MAC incumbents from other MAJCOMs. Table 25 illustrates that still cameras, such as the Nikon F-2, the MP-3 4X5 Polaroid copy camera, aerial cameras, audiovisual equipment, and other items are maintained to the greatest degree by MAC personnel. Table 26 shows that the tasks which separate MAC personnel from the other MAJCOMs are mostly concentrated in the still and motion picture camera areas. This is also supported by the fact that the largest concentration of the Camera Maintenance Personnel and the Motion Picture/Aerial Camera Maintenance Personnel clusters are MAC personnel (see Table 23). Job satisfaction data for these incumbents, 32 percent of whom were assigned overseas, reveals that they find their job the most interesting and their talents the most well utilized but their training the least utilized of any of the major commands.

### SAC

This MAJCOM has the largest concentration of 404X0 personnel of any major command (60). Performing an average of 129 tasks, these individuals have the narrowest job reported by any major command. Support systems, such as print dryers and light tables are maintained by a moderately high percentage of SAC incumbents, making this a fairly homogeneous group. Processor maintenance also consumed a lot of SAC personnel's time. However, no equipment was found which was exclusively maintained by SAC personnel. This could possibly be due to classified equipment maintained by some SAC personnel which was not included in this survey. Concerning the area of differentiating tasks, there were no tasks performed to a substantially higher degree by SAC incumbents as compared to the other MAJCOMs. Job satisfaction information for SAC personnel is displayed in Table 27.

### TAC

The 58 incumbents in the Tactical Air Command spent the most job time of any major command on the maintenance of processors. With an even higher percentage of their time spent on support systems maintenance, these individuals constitute a fairly homogeneous grouping. Mobile facilities are also a concern of TAC personnel; as illustrated in Table 26, mobile facilities are maintained to a higher degree by these individuals than any other MAJCOM excepting USAFE. Table 24 also supports this contention, with TAC spending much more time on mobile facilities in general and with processors being maintained by a high percentage of TAC personnel. TAC personnel do not, however, feel their talents are utilized as well as other MAJCOM personnel do, as revealed in Table 27.

### USAFE

The 47 404X0 personnel in this major command formed a very homogeneous group, with a high percentage of the incumbents maintaining processors and maintaining support systems such as light tables and titlers. Table 26 shows that the tasks which best differentiate USAFE are in the areas of processor and mobile facility maintenance. This is also confirmed by Table 25, with mobile facilities and processors in general both being maintained by a high percentage of USAFE incumbents. Table 23 further supports this by revealing that the highest concentration of the Photographic Support Systems and Processor/Printer Maintenance Personnel cluster and the Mobile Laboratory Maintenance Personnel cluster are in USAFE. Individuals in USAFE felt that their training was utilized better than did any other major command. Seventy-five percent of these incumbents found their job interesting.

### Summary

The jobs performed by 404X0 personnel were found to vary according to major command. Differences were noted in such areas as time spent on duties, equipment maintained, and tasks performed. Job satisfaction indices also varied as well. ATC incumbents were a fairly heterogeneous group, performing diverse duties and tasks with little commonality. MAC personnel had the broadest job of any command group and spent considerable job time in the areas of still and motion picture camera maintenance. SAC personnel were somewhat homogeneous in nature; however, these incumbents had no special area of expertise that they performed to a much greater extent than any other MAJCOM. TAC and USAFE personnel both worked a great deal with support systems, processors, and mobile facilities.

TABLE 23  
DISTRIBUTION OF MEMBERS OF EACH JOB GROUP WITHIN EACH MAJOR COMMAND

	<u>ATC</u>	<u>MAC</u>	<u>SAC</u>	<u>TAC</u>	<u>USAFE</u>
SUPERVISORS	-	3	5	5	3
QC NCOICs	-	4	1	-	1
INSTRUCTORS	5	-	-	-	-
MAINTENANCE SCHEDULERS	-	4	1	-	-
CAMERA MAINTENANCE PERSONNEL	10	21	3	7	6
PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL	1	5	14	8	2
PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL	6	6	24	27	28
JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL	1	2	4	-	1
MOBILITY LABORATORY MAINTENANCE PERSONNEL	-	-	-	2	5
AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL	3	1	-	-	-
MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL	1	5	-	2	-
OTHER	5	<u>2</u>	<u>8</u>	<u>7</u>	<u>1</u>
TOTAL	32	53	60	58	47

TABLE 24  
PERCENTAGE OF TIME SPENT ON DUTIES BY MAJOR COMMAND

DUTY	ATC	MAC	SAC	TAC	USAFE
A ORGANIZING AND PLANNING	2	3	5	4	4
B DIRECTING AND IMPLEMENTING	4	7	6	4	4
C INSPECTING AND EVALUATING	2	4	4	2	3
D TRAINING	14	2	2	3	2
E PERFORMING ADMINISTRATIVE FUNCTIONS	9	12	13	12	11
F INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	8	8	15	18	16
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	19	17	34	27	33
H MAINTAINING PRINTER SYSTEMS	6	5	9	7	9
I MAINTAINING STILL CAMERA SYSTEMS	10	12	3	2	3
J MAINTAINING MOTION PICTURE CAMERAS	8	11	*	4	1
K MAINTAINING GENERAL CAMERA EQUIPMENT	6	9	3	2	2
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	11	9	5	6	4
M MAINTAINING MOBILITY LABORATORIES	1	1	1	7	8

\* DENOTES LESS THAN ONE PERCENT

TABLE 25  
BACKGROUND INFORMATION FOR MAJOR COMMAND GROUPS

	ATC (N=32)	MAC (N=53)	SAC (N=60)	TAC (N=58)	USAFE (N=47)
AVERAGE NUMBER OF TASKS PERFORMED:	140	195	129	134	160
AVERAGE MONTHS TAFMS:	75	93	96	73	105
AVERAGE GRADE:	4.0	4.5	4.5	4.0	4.8
PERCENT ASSIGNED OVERSEAS:	0%	32%	10%	3%	100%
DAFSC:					
40430	28%	9%	13%	12%	8%
40450	47%	66%	63%	76%	64%
40470	25%	21%	17%	12%	28%
40499 AND CEM CODE 40400	0%	4%	7%	0%	0%
PERCENT MAINTAINING MOBILE FACILITIES:	34%	13%	25%	59%	51%
PERCENT MAINTAINING STILL CAMERAS:	59%	72%	37%	40%	26%
PERCENT MAINTAINING KS-99 CANON STILL CAMERA:	53%	8%	7%	5%	0%
PERCENT MAINTAINING NIKON F-2 STILL CAMERA:	25%	60%	20%	19%	13%
PERCENT MAINTAINING COPY CAMERAS:	53%	72%	75%	38%	53%
PERCENT MAINTAINING MP-3 4X5 POLAROID COPY CAMERA:	6%	49%	12%	9%	13%
PERCENT MAINTAINING MOTION PICTURE CAMERAS:	63%	59%	10%	17%	13%
PERCENT MAINTAINING CANON SCOPICS MOTION PICTURE CAMERA:	9%	34%	0%	0%	0%
PERCENT MAINTAINING AERIAL CAMERAS:	13%	28%	8%	10%	15%
PERCENT MAINTAINING DMB-5 AERIAL CAMERA:	0%	15%	0%	2%	0%
PERCENT MAINTAINING PROCESSORS:	69%	70%	83%	90%	94%
PERCENT MAINTAINING ME-4 COLOR PROCESSOR:	59%	19%	2%	7%	6%
PERCENT MAINTAINING VERSMAT 1811 CM COLOR PROCESSOR:	50%	0%	30%	3%	21%
PERCENT MAINTAINING PRINTERS:	72%	72%	83%	83%	87%
PERCENT MAINTAINING AUDIOVISUAL EQUIPMENT:	66%	79%	42%	52%	45%
PERCENT MAINTAINING REEL-TO-REEL TAPE RECORDERS:	34%	26%	5%	3%	0%
PERCENT MAINTAINING PUBLIC ADDRESS SYSTEMS:	41%	23%	2%	9%	2%

TABLE 26  
REPRESENTATIVE TASKS WHICH BEST DIFFERENTIATE MAJOR COMMAND GROUPS  
(PERCENT MEMBERS PERFORMING)

TASKS	ATC	MAC	SAC	TAC	USAFE
F171 ISOLATE MALFUNCTIONS IN WATER TEMPERATURE MIXING VALVES	38	40	48	59	70
G227 INSPECT DENSITOMETERS	47	47	53	64	77
G253 ISOLATE MALFUNCTIONS IN DENSITOMETERS	41	38	57	60	72
G271 ISOLATE MALFUNCTIONS IN TITLERS	41	0	33	43	64
G332 REMOVE OR REPLACE DENSITOMETER COMPONENTS	38	34	53	60	75
H373 INSPECT MANUAL CONTACT PRINTERS	28	43	42	36	70
M806 CONNECT OR DISCONNECT LOAD TRANSFER UNITS	6	4	2	36	36
M813 INSPECT TIRE PRESSURES ON TRANSPORTERS	13	6	10	43	40
M816 LEVEL RELOCATABLE FACILITIES	13	6	10	41	45
M827 POSITION RELOCATABLE FACILITIES	6	6	5	40	40
G228 INSPECT DRY MOUNTING PRESSES	16	57	42	7	26
I416 CLEAN AND LUBRICATE APERTURES	25	51	12	9	9
I410 ADJUST RANGE FINDERS	31	43	7	7	15
I423 CLEAN AND LUBRICATE FOCAL PLANE SHUTTERS	25	47	7	7	13
I436 INSPECT BETWEEN-THE-LENS SHUTTERS	31	57	13	7	17
I438 INSPECT FILM ADVANCE MECHANISMS	28	53	17	10	15
J509 ADJUST FILM TAKEUP ASSEMBLIES	22	42	0	10	4
J541 INSPECT EXTERNAL MAGAZINES	9	38	2	5	0
J542 INSPECT FILM TAKEUP ASSEMBLIES	15	43	3	10	4
J555 INSPECT SHUTTLE ASSEMBLIES	13	38	2	7	2
D076 ATTEND SPECIAL TRAINING COURSES OR BRIEFINGS	34	25	17	12	19
D078 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	25	0	2	2	2
D080 COUNSEL TRAINEES ON TRAINING PROGRESS	28	30	18	17	19
D086 DEVELOP TRAINING AIDS	25	9	3	7	9

TABLE 27

JOB SATISFACTION INFORMATION FOR MAJOR COMMAND GROUPS  
(PERCENT RESPONDING)

	<u>ATC</u>	<u>MAC</u>	<u>SAC</u>	<u>TAC</u>	<u>USAFE</u>
<u>I FIND MY JOB:</u>					
DULL	15	2	7	10	4
SO-SO	19	7	18	14	19
INTERESTING	66	89	75	76	75
NOT REPORTED	0	2	0	0	2
<u>MY JOB UTILIZES MY TALENTS:</u>					
VERY LITTLE OR NOT AT ALL	28	19	20	35	21
FAIRLY WELL OR BETTER	72	81	80	65	79
NOT REPORTED	0	0	0	0	0
<u>MY JOB UTILIZES MY TRAINING:</u>					
VERY LITTLE OR NOT AT ALL	19	30	22	29	19
FAIRLY WELL OR BETTER	78	68	77	71	81
NOT REPORTED	3	2	1	0	0

## ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison of the 404XO personnel assigned within the continental United States (CONUS) with those 404XO personnel assigned overseas was performed on the basis of task and background survey data. Analysis revealed differences between the groups to be minor. Overall, both groups performed essentially the same job, with some minor background variations. Table 28 lists those tasks which best differentiate these groups. There were no areas in which over 10 percent more CONUS personnel performed a task as compared to overseas personnel.

As can be seen in Table 29, there were some differences, however, in background data between these groups. Overseas personnel averaged a greater number of tasks and a greater average time in the career field and time in the service. Overseas personnel also reported maintaining more mobile facilities and working with more processors, printers, manual densitometers, sensitometers, and photographic editing equipment. Comparatively, CONUS personnel reported working more in Base Photolab/Maintenance areas, whereas more Overseas personnel reported working in mobile reconnaissance laboratories. No other substantial differences were noted between the CONUS and Overseas personnel.

Consequently, it can be said that the differences between 404XO CONUS and Overseas personnel lie in the areas of processor maintenance, mobile facility work, and other background information. Otherwise, these two groups perform essentially the same job.

TABLE 28  
TASKS WHICH BEST DIFFERENTIATE 404XO  
CONUS AND OVERSEAS PERSONNEL

TASK	PERCENT OF CONUS PERSONNEL RESPONDING	PERCENT OF OVERSEAS PERSONNEL RESPONDING	DIFFERENCE
F145 CALIBRATE SPEED CONTROL INDICATORS	33	65	-32
E115 MAKE ENTRIES ON ISSUE/TURN IN REQUEST FORMS (AF FORM 2005)	43	74	-31
H385 PERFORM CORROSION CONTROL ON PROJECTION PRINTERS	35	65	-30
F156 CONNECT OR DISCONNECT WATER MIXING VALVES	46	75	-29
F192 THREAD TUBING	36	63	-27
E127 MAKE ENTRIES ON SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	39	65	-26
G237 INSPECT SENSITOMETERS	36	62	-26
G271 ISOLATE MALFUNCTIONS IN TITLERS	29	55	-26
G345 REMOVE OR REPLACE PROCESSORS PUMPS OR FILTERS	44	70	-26
G309 PERFORM OPERATIONAL CHECKS ON PH METERS	22	47	-25
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	57	82	-25
E112 MAKE ENTRIES ON DANGER TAGS (AF FORM 1492)	14	39	-25
M816 LEVEL RELOCATABLE FACILITIES	16	41	-25
G284 PERFORM CORROSION CONTROL ON LIGHT TABLES	32	56	-24
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	45	69	-24
G314 PERFORM OPERATIONAL CHECKS ON SENSITOMETERS	32	56	-24
G344 REMOVE OR REPLACE PROCESSOR OR FILTER COMPONENTS	45	69	-24
G346 REMOVE OR REPLACE SENSITOMETER COMPONENTS	26	49	-23
G313 PERFORM OPERATIONAL CHECKS ON PROCESSOR PUMPS OR FILTERS	44	67	-23
M824 PERFORM CORROSION CONTROL ON RELOCATABLE FACILITIES	18	41	-23
M804 CONDUCT INSPECTIONS OF SHELTER WALLS FOR DELAMINATION	15	38	-23
M814 INSTALL OR REMOVE RELOCATABLE FACILITY PASSAGEWAYS	17	38	-21
M825 PERFORM CORROSION CONTROL ON TRANSPORTERS	16	37	-21
M827 POSITION RELOCATABLE FACILITIES	14	35	-21

TABLE 29  
JOB SATISFACTION AND BACKGROUND INFORMATION FOR  
CONUS AND OVERSEAS GROUPS

	404X0 CONUS PERSONNEL (N=187)	404X0 OVERSEAS PERSONNEL (N=91)
AVERAGE NUMBER OF TASKS PERFORMED:	140	180
AVERAGE TIME IN CAREER FIELD (MONTHS):	66	88
AVERAGE TIME IN SERVICE (TAFMS):	84	104
PERCENT FINDING THEIR JOB INTERESTING:	77	78
PERCENT PERCEIVING AT LEAST FAIR UTILIZATION OF THEIR TALENTS:	74	81
PERCENT PERCEIVING AT LEAST FAIR UTILIZATION OF THEIR TRAINING:	74	78
PERCENT WORKING AT BASE PHOTO LAB/MAINTENANCE	50	31
PERCENT WORKING AT A MOBILE RECONNAISSANCE LABORATORY:	17	42
PERCENT MAINTAINING A WS-428 MOBILE FACILITY	1	11
PERCENT MAINTAINING A WS-430 MOBILE FACILITY	20	33
PERCENT MAINTAINING PRINTERS	76	89
PERCENT MAINTAINING PROCESSORS	76	93
PERCENT MAINTAINING MANUAL DENSITOMETERS	41	66
PERCENT MAINTAINING SENSITOMETERS	47	74
PERCENT MAINTAINING PHOTOGRAPHIC EDITING EQUIPMENT	64	85

## ANALYSIS OF DAVA AND AAVA PERSONNEL

Since the similarity or difference in jobs or tasks performed by Defense Audiovisual Agency (DAVA) and Aerospace Audiovisual Agency (AAVS) personnel as compared to the rest of the 404X0 field was a major issue to be addressed in this study, the responses of these personnel were closely examined. Only 10 incumbents assigned to Norton AFB were included in the final sample. All 10 reported their organization as AAVS. No other AAVS personnel were found in the sample, and no respondents reported the DAVA as their organization (possibly due to its recent creation as a split from the AAVS).

Overall, the 10 respondents from Norton AFB performed no job that is substantially different from that performed by other 404X0 personnel. No thread of commonality was noted for the personnel assigned to Norton, other than the base to which they were assigned. Consequently, a shredout for the AAVS 404X0 personnel seems unnecessary in light of the 404X0 jobs they reported performing.

## EQUIPMENT MAINTAINED

In order to assist the technical training school at Lowry AFB and MAJCOM functional managers in evaluating training needs and requirements, an extensive analysis of equipment maintained was conducted. Tables 30 and 31 highlight those items of equipment which are maintained by various AFMS and MAJCOM groups respectively. Table 32 lists those items of equipment which are maintained by very few career ladder incumbents.

TABLE 30

SPECIFIC EQUIPMENT MAINTAINED  
 BY 404X0 EXPERIENCE GROUPS  
 (PERCENT MEMBERS PERFORMING)

<u>SPECIFIC EQUIPMENT MAINTAINED</u>	<u>TOTAL SAMPLE</u>	<u>1-48 MONTHS TAFMS</u>	<u>49-96 MONTHS TAFMS</u>	<u>97+ MONTHS TAFMS</u>
<u>MOBILE FACILITIES</u>	37	39	32	38
WS-430	24	31	17	20
<u>STILL CAMERAS</u>	47	49	53	42
C-6 4X5 GRAFLEX	22	28	21	17
KE-46 XL-75 GRAFLEX	24	26	21	21
KE48A NIKON F	31	34	23	30
KE-58 KONI-OMEGA/RAPIDOMEGA	34	37	32	30
NIKON F-2	26	30	26	22
POLAROID LAND (1D)	14	15	19	11
4X5 CALUMET STUDIO	25	23	23	28
4X5 SUPERSPEED 1000 GRAFLEX	18	20	21	13
<u>COPY CAMERAS</u>	59	59	60	58
KE-62 SICKLES	38	33	40	41
MP-3 4X5 POLAROID	17	17	15	19
MP-35 SICKLES 35MM SLIDES	23	22	28	22
11X14 PRINCETON	21	16	32	21
<u>MOTION PICTURE CAMERAS</u>	29	37	28	23
APRIFLEX 16BL	9	11	6	7
APRIFLEX 16M	12	14	15	10
BELL & HOWELL 70 DR (B1A)	10	11	11	8
CANON SCOPICS	9	9	6	10
<u>AERIAL CAMERAS</u>	15	16	13	16
<u>PROCESSORS</u>	82	88	87	83
CM-16 COLORMASTER	4	6	2	4
FULTRON 111B	19	20	21	17
ME-4 COLOR	15	20	13	10
VERSMAT 11 CM BLACK & WHITE	38	34	40	37
VERSMAT 1811 CM COLOR	20	23	30	15
214K EKTAMAT ONE STEP	26	30	23	24
<u>PRINTERS</u>	81	85	79	77
B-15 SIMMON OR EN-52	39	37	38	41
BEACON PRECISION ENLARGER	13	9	17	17
CHROMEGA F	12	11	6	15
EN-6	17	23	13	12
EN-22A	65	71	64	57
EN-67A	21	20	30	19
MK-2 R5A/B	29	31	36	25
NIAGRA EN-86A	47	50	53	41

TABLE 30 (CONTINUED)

SPECIFIC EQUIPMENT MAINTAINED  
BY 404X0 EXPERIENCE GROUPS  
(PERCENT MEMBERS PERFORMING)

PRINTERS (CONTINUED)	TOTAL SAMPLE	1-48 MONTHS TAFMS	49-96 MONTHS TAFMS	97+ MONTHS TAFMS
EASTMAN KODAK RAINBOW	5	4	4	7
SP-1070 STRIP PRINTERS LOGE	26	24	32	25
X-184 DURST	22	18	28	23
BELL & HOWELL 6100 CY BLACK & WHITE	7	10	9	4
BELL & HOWELL 6100 C/6100 COLOR 16MM	9	12	9	6
COLONADO 037-001 EASTMAN	12	6	21	14
 PRINTER ACCESSORIES	 19	 20	 23	 17
6170D PERFORATORS	8	10	9	7
 AUDIOVISUAL EQUIPMENT	 56	 57	 62	 51
AQ-ZA BELL AND HOWELL 16MM PROJECTORS	14	15	13	14
AV126 PADGETT/7015X KLART VICTOR	8	7	6	10
BELL & HOWELL 545 PROJECTORS	22	20	17	24
CARAMATE CAROUSEL PROJECTORS	16	19	17	12
CAROUSEL PROJECTORS	42	44	47	36
EKTAGRAPHIC CAROUSEL PROJECTORS	23	24	23	20
OVERHEAD PROJECTORS	39	37	40	40
PALACE FLICK PROJECTORS	8	9	6	7
CAROUSEL SLIDE PROJECTORS	43	43	51	39
BELL & HOWELL SOUND MOTION PICTURE (MP) PROJECTORS	32	34	32	30
GRAPHLEX/SINGER 16MM SOUND MP PROJECTORS	22	24	17	21
CARAMATE SLIDE PROJ/CASSETTE RECORDERS	16	19	13	13
REEL-TO-REEL TAPE RECORDER	12	15	11	9
SYNCHRONIZERS	13	17	11	10
CASSETTE RECORDERS	24	27	19	22
DISSOLVE CONTROL UNITS	16	19	11	14
PUBLIC ADDRESS SYSTEMS	13	18	9	8
 PHOTOGRAPHIC SUPPORT EQUIPMENT	 85	 90	 85	 81
ANALYZERS	17	16	15	20
AUTO DENSITOMETERS	16	12	25	16
CARRYING AND STORAGE CASES	14	17	13	12
MANUAL DENSITOMETERS	50	50	40	52
DRY MOUNTING PRESSES	37	34	45	37
FILM DRYERS	62	66	72	52
FIXED HEATERS	20	20	15	24
FIXED WATER CHILLERS	23	23	19	24
FLASH UNITS	35	37	40	30
KODAK SLIDE MOUNTERS	24	30	15	22
LIGHT ASSEMBLIES	29	30	28	27
LIGHT METERS	31	37	26	28

TABLE 30 (CONTINUED)

SPECIFIC EQUIPMENT MAINTAINED  
BY 404X0 EXPERIENCE GROUPS  
(PERCENT MEMBERS PERFORMING)

<u>PHOTOGRAPHIC SUPPORT EQUIPMENT (CONTINUED)</u>	<u>TOTAL SAMPLE</u>	<u>1-48 MONTHS TAFMS</u>	<u>49-96 MONTHS TAFMS</u>	<u>97+ MONTHS TAFMS</u>
MANUAL EASELS	24	17	36	25
MIXERS	61	56	68	63
PEAKO LUX	30	27	26	34
PEAKO SLIDE MOUNTERS	29	27	36	27
PH METERS	47	50	43	45
PRINT DRYERS	66	70	70	70
REWIND EQUIPMENT	27	24	26	30
SCREENS	16	12	15	19
SENSITOMETERS	56	52	60	57
SILVER RECOVERY UNITS	60	61	60	58
SINKS	59	61	68	52
STUDIO LAMPS	34	34	36	33
TACKY ROLL FILM CLEANERS	36	37	40	33
TIMERS	69	70	77	64
TRIPODS	31	27	36	30
TRIPODS HEADS	20	18	23	19
WATER SUPPLY KITS	20	15	23	23
<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	<u>71</u>	<u>71</u>	<u>81</u>	<u>68</u>
DELAWARE TITLERS	39	50	40	29
HAND SPLICERS	24	24	30	22
MODEL 198 BELL & HOWELL SPL	9	11	4	10
MOVIOLAS 16 MM/35MM	13	17	6	10
MOVIOLAS LIBRARY VIEWER READERS (LVR)	8	9	6	9
RICHARDS LIGHT TABLES	42	37	53	44

TABLE 31

SPECIFIC EQUIPMENT MAINTAINED  
BY 404X0 MAJOR COMMAND GROUPS  
(PERCENT MEMBERS PERFORMING)

SPECIFIC EQUIPMENT MAINTAINED	TOTAL SAMPLE	ATC	MAC	SAC	TAC	USAFFE
<u>MOBILE FACILITIES</u>						
WS-430	37 24	34 31	13 2	25 2	59 43	51 43
<u>STILL CAMERAS</u>	47	59	72	37	40	26
C-6 4X5 GRAFLEX	22	50	45	13	7	9
KE-46 XL-75 GRAFLEX	24	41	43	7	16	13
KE48A NIKON F	31	34	64	23	26	15
KE-58 KONI-OMEGA/RAPIDOMEGA	34	50	64	28	21	19
NIKON F-2	26	25	60	20	19	13
POLAROID LAND (ID)	14	22	30	5	5	13
4X5 CALUMET STUDIO	25	16	45	27	22	17
4X5 SUPERSPEED 1000 GRAFLEX	18	41	34	7	5	11
<u>COPY CAMERAS</u>	59	53	72	75	38	53
KE-62 SICKLES	38	44	42	48	22	32
MP-3 4X5 POLAROID	17	6	49	12	9	13
MP-35 SICKLES 35MM SLIDES	23	34	26	22	19	21
11X14 PRINCETON	21	6	26	20	17	26
<u>MOTION PICTURE CAMERAS</u>	29	63	59	10	17	13
APRIFLEX 16BL	9	25	30	0	0	0
APRIFLEX 16M	12	41	30	0	9	0
BELL & HOWELL 70 DR (B1A)	10	13	28	3	7	0
CANON SCOPICS	9	9	34	0	0	0
<u>AERIAL CAMERAS</u>	15	13	28	8	10	15
<u>PROCESSORS</u>	82	69	70	83	90	94
CM-16 COLORMASTER	4	28	2	2	2	0
FULTRON 111B	19	47	2	27	0	21
ME-4 COLOR	15	59	19	2	7	6
VERSMAT 11 CM BLACK & WHITE	38	44	11	57	33	36
VERSMAT 1811 CM COLOR	20	50	0	30	3	21
214K EKTAMAT ONE STEP	26	9	13	22	38	51
<u>PRINTERS</u>	81	72	72	83	83	87
B-15 SIMMON OR EN-52	39	28	36	42	52	38
BEACON PRECISION ENLARGER	13	3	2	32	3	9
CHROMEGA F	12	25	8	13	7	13
EN-6	17	6	2	13	36	19
EN-22A	65	59	59	65	72	81
EN-67A	21	16	9	28	12	32
MK-2 R5A/B	29	50	4	22	24	60
NIAGRA EN-86A	47	66	2	42	50	70

TABLE 31 (CONTINUED)

SPECIFIC EQUIPMENT MAINTAINED  
BY 404X0 MAJOR COMMAND GROUPS  
(PERCENT MEMBERS PERFORMING)

<u>PRINTERS (CONTINUED)</u>	<u>TOTAL SAMPLE</u>	<u>ATC</u>	<u>MAC</u>	<u>SAC</u>	<u>TAC</u>	<u>USAR</u>
EASTMAN KODAK RAINBOW	5	0	0	25	0	6
SP-1070 STRIP PRINTERS LOGIC	26	47	4	33	14	43
X-184 DURST	22	9	4	27	17	36
BELL & HOWELL 6100 CY BLACK & WHITE	7	28	9	2	2	-
BELL & HOWELL 6100 C/6100 COLOR 16MM	9	25	19	2	3	4
COLONADO 037-001 EASTMAN	12	0	0	20	5	21
<u>PRINTER ACCESSORIES</u>	<u>19</u>	<u>38</u>	<u>34</u>	<u>15</u>	<u>12</u>	<u>15</u>
6170D PERFORATORS	8	34	19	2	2	0
<u>AUDIOVISUAL EQUIPMENT</u>	<u>56</u>	<u>66</u>	<u>79</u>	<u>42</u>	<u>52</u>	<u>41</u>
AQ-ZA BELL AND HOWELL 16MM PROJECTORS	14	13	34	7	12	2
AV126 PADGETT/7015X KLART VICTOR	8	3	30	3	0	4
BELL & HOWELL 545 PROJECTORS	22	16	36	25	19	17
CARAMATE CAROUSEL PROJECTORS	16	16	47	8	10	9
CAROUSEL PROJECTORS	42	63	55	33	38	34
ECTAGRAPHIC CAROUSEL PROJECTORS	23	34	47	18	14	9
OVERHEAD PROJECTORS	39	34	59	37	33	28
PALACE FLICK PROJECTORS	8	0	28	7	3	0
CAROUSEL SLIDE PROJECTORS	43	53	62	30	35	36
BELL & HOWELL SOUND MOTION PICTURE (MP) PROJECTORS	32	34	60	27	28	21
GRAPHLEX/SINGER 16MM SOUND MP PROJECTORS	22	38	38	13	22	13
CARAMATE SLIDE PROJ/CASSETTE RECORDERS	16	9	47	12	10	6
REEL-TO-REEL TAPE RECORDERS	12	34	26	5	3	0
SYNCHRONIZERS	13	47	21	3	7	2
CASSETTE RECORDERS	24	50	40	17	24	13
DISSOLVE CONTROL UNITS	16	44	32	2	14	6
PUBLIC ADDRESS SYSTEMS	13	41	26	2	9	2
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	<u>85</u>	<u>75</u>	<u>79</u>	<u>82</u>	<u>90</u>	<u>94</u>
ANALYZERS	17	34	17	15	9	9
AUTO DENSITOMETERS	16	16	6	25	7	11
CARRYING AND STORAGE CASES	14	22	17	17	10	9
MANUAL DENSITOMETERS	50	31	40	42	57	66
DRY MOUNTING PRESSES	37	22	66	40	14	32
FILM DRYERS	62	50	68	65	53	66
FIXED HEATERS	20	9	21	23	22	26
FIXED WATER CHILLERS	23	6	19	18	35	30
FLASH UNITS	35	53	55	25	22	21
KODAK SLIDE MOUNTERS	24	41	30	17	19	30
LIGHT ASSEMBLIES	29	31	36	23	31	32
LIGHT METERS	31	53	53	23	21	15

TABLE 31 (CONTINUED)

SPECIFIC EQUIPMENT MAINTAINED  
BY 404X0 MAJOR COMMAND GROUPS  
(PERCENT MEMBERS PERFORMING)

<u>PHOTOGRAPHIC SUPPORT EQUIPMENT (CONTINUED)</u>	<u>TOTAL SAMPLE</u>	<u>ATC</u>	<u>MAC</u>	<u>SAC</u>	<u>TAC</u>	<u>USAFE</u>
MANUAL EASELS	24	25	28	30	16	17
MIXERS	61	41	59	72	52	66
PEAKO LUX	30	28	38	27	22	45
PEAKO SLIDE MOUNTERS	29	31	49	12	22	23
PH METERS	47	44	32	28	67	60
PRINT DRYERS	66	53	60	67	69	60
REWIND EQUIPMENT	27	9	42	32	22	26
SCREENS	16	3	32	23	5	11
SENSITOMETERS	56	50	26	45	66	89
SILVER RECOVERY UNITS	60	38	53	62	64	79
SINKS	59	41	59	55	62	68
STUDIO LAMPS	34	31	60	38	24	19
TACKY ROLL FILM CLEANERS	36	25	2	32	50	62
TIMERS	69	56	64	65	74	79
TRIPODS	31	56	51	28	16	17
TRIPODS HEADS	20	41	28	18	16	9
WATER SUPPLY KITS	20	59	72	65	69	87
<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	<u>71</u>	<u>59</u>	<u>4</u>	<u>25</u>	<u>60</u>	<u>62</u>
DELAWARE TITLERS	39	53	4	25	60	62
HAND SPLICERS	24	31	42	17	17	17
MODEL 198 BELL & HOWELL SPL	9	16	28	3	2	4
MOVIOLAS 16 MM/35MM	13	38	26	5	5	4
MOVIOLAS LIBRARY VIEWER READERS (LVR)	8	3	30	2	7	0
RICHARDS LIGHT TABLES	42	41	23	38	45	66

TABLE 32  
EQUIPMENT RARELY MAINTAINED BY 404XO PERSONNEL

EQUIPMENT MAINTAINED BY NONE OF THE 404XO TOTAL SAMPLE

PROCESSORS

A1010N AUTOMATIC NEGATIVE  
EH-S PAPER  
EH-80 SERIES  
LM-13  
VISCOMAT  
16 P BLACK AND WHITE HIGH SPEED

EQUIPMENT MAINTAINED BY LESS THAN FIVE PERCENT OF THE 404XO TOTAL SAMPLE

MOBILE FACILITIES

SARPH  
WS 428 (TIPPIE)  
  
STILL CAMERAS  
C-1 8 X 10 DEARDORFF  
HULCHER 70 MM  
KE-28 MAUER 70 MM

COPY CAMERAS

I1EK  
MAPPING COPY 20X30  
MAPPING COPY 30X40  
MICROMASTER

MOTION PICTURE CAMERAS

AURRICON  
FASTEX WF-125  
MITCHELL BNC  
MITCHELL DSR  
MITCHELL 16235  
MITCHELL 35MK2  
MITCHELL 35 MM  
NORTHRIDGE 35 MM

PROCESSORS

BI-MAT  
EJ-14 PROCESSOR-RECORDERS SINGER  
ES-55A GOODYEAR CORRELATOR  
ES-88 GOODYEAR  
HTA-3C H/F WIDE FILM  
HTA-CP-2  
HTA-CP-2  
HTA-3RC

PRINTERS

B-11 EN-88  
B-16 SIMMON  
BELL & HOWELL DUPUE REDUCTION  
MODEL D  
MODEL J  
OXBERRY OPTICAL  
PHOTOSONIC OPTICAL

PRINTER ACCESSORIES

COATING UNITS  
CODING UNITS  
Q-MATIC PERFORATORS  
Q-MATIC READERS  
61730 VERIFIERS

AUDIOVISUAL EQUIPMENT

FLIPPERS  
POWER CONTROLS  
SAWYER PROJECTORS  
8 MM PROJECTORS

PHOTOGRAPHIC SUPPORT EQUIPMENT

CRAB DOLLIES  
FILM PLOTTING KITS  
MOBILE HEATERS  
PRINT STRAIGHTNERS

PHOTOGRAPHIC EDITING EQUIPMENT

FAIRCHILD TITLERS  
MOVIOLOAS MODEL 50 VIEWERS  
SHOWCHRONES  
WESTREX VIEWERS  
79A ELECTRIC VIEWERS

## TRAINING ANALYSIS

One of the most important uses of occupational survey data is in the area of training. Survey data which is useful to 404X0 training development personnel include: (1) percentage of first enlistment members performing task(s), (2) utilization of equipment by incumbents, and (3) task difficulty ratings. These data can be used in evaluating the Specialty Training Standard (STS) and Plan of Instruction (POI) for the 404X0 specialty. Technical school personnel at Lowry AFB, CO matched inventory tasks to areas of instruction outlined in the STS, dated July 1977 and the POI for course G3ABR40430, dated June 1980. A complete computer listing of the percent members performing and task difficulty ratings along with the STS and POI matching has been forwarded to the technical school for their use in reviewing training documents. That information is summarized below.

### Analysis of Task Difficulty

The relative difficulty of each task in the job inventory was assessed through ratings by 30 experienced 7- and 9-skill level 404X0 NCOs. These tasks were processed to produce an ordered listing of all tasks in terms of their relative difficulty and were standardized to have an average difficulty of 5.0 (standard deviation equals 1.0). (For a more detailed description of these ratings, see the Task Factor Administration section in the INTRODUCTION.)

Table 33 lists those tasks rated most difficult by the experienced 404X0 raters. Most of the tasks are technical in nature and involve maintaining camera systems. This finding is consistent with the fact that the Camera Maintenance cluster in the career ladder structure had the highest Job Difficulty Index (JDI) of all the groups. Also included are several supervisory tasks; overall, however, very few of the most difficult tasks are performed by more than 25 percent of the total 404X0 sample.

Most of the tasks rated average in difficulty are also technical in nature; however, as Table 34 displays, these tasks covered a wider spectrum of the different 404X0 jobs. Typical average difficulty tasks include tasks such as isolating malfunctions in speaker systems, inspecting prism assemblies, and performing corrosion control on relocatable facilities.

Table 35 lists those tasks rated the least difficult by senior 404X0 personnel. Generally, these tasks were concerned with routine simple maintenance of equipment. Many of these tasks dealt with general camera equipment. As could be expected, a larger percentage of 404X0 incumbents perform these less difficult tasks.

### Job Difficulty Index (JDI)

Table 36 lists the 11 major job groups identified in the job structure analysis section. The job groups are listed in order from the most to the least difficult job according to their computed job difficulty index (JDI). (The Administration section in the INTRODUCTION of this report gives a more detailed description of the job difficulty index). Overall, there was not an

extreme variation in the difficulty of the jobs, with the exception of the Camera Maintenance Personnel cluster and the Maintenance Schedulers Independent Job Type.

As depicted, the Camera Maintenance Personnel cluster reports the most difficult job of any group. This is not surprising considering the large number of tasks performed by this group. Even though the Average Task Difficulty Per Unit Time Spent (ATDPUTS) for this group is comparatively about average, the extreme number of tasks performed by these individuals makes their job the hardest of any group.

The Supervisors cluster performed the hardest tasks on the average (as revealed by the ATDPUTS ratings), but the smaller number of tasks performed by this group made their job slightly easier than the average. The Maintenance Schedulers Independent Job Type is similar in that the incumbents perform somewhat more difficult tasks than average, but they perform such a small number of tasks that their job is rated the easiest of all groups.

The Junior Photographic Support Systems and Processor/Printer Maintenance Personnel and the Mobility Laboratory Maintenance Personnel Independent Job Types held the next easiest jobs to that of the Maintenance Schedulers. The rest of the clusters and independent job types were of near average difficulty ranging from 11.0 to 13.7 on the JDI scale.

As a result of this job difficulty analysis then, it can be said that increasing experience leads to the performance of harder tasks, but not necessarily a harder job overall. Consequently, the number of tasks performed seems to be the determining factor in deciding the difficulty of the jobs in the 404X0 career ladder.

#### Analysis of the 404X0 Specialty Training Standard (STS)

The 404X0 Specialty Training Standard, dated July 1977, was reviewed against survey data for first job and first enlistment Precision Imagery and Audiovisual Media Maintenance personnel. Subject matter specialists at the Lowry Technical Training Center assisted in the analysis by matching job inventory tasks to specific paragraphs in the STS. Each paragraph in the STS was analyzed using task difficulty and percent members performing vectors to determine if the paragraph had job inventory justification for inclusion in the STS. Overall, the STS gave a good representation of the equipment maintained and corresponding proficiency requirements. However, some possible improvements were noted.

The STS showed an adequate representation of the test equipment used; however, two pieces of test equipment--strobotacs and lens collimators--were used by less than 15 percent of all 404X0 personnel. The knowledge requirement for the strobotac was for partial proficiency with procedural task knowledge. This could possibly be reduced to a less proficient level. The proficiency level for the lens collimators was slightly lower and could conceivably be reduced further. Ammeters and Volt-Ohmeters (VOM) were both used by over 40 percent of the sample, but were not included at all in the STS. Inclusion of these might enhance the accuracy of the document.

STS areas with few members reporting the performance of tasks included audiovisual production systems, audio amplifiers, microphones, record players, and electronic/digital directed programmers. These areas could possibly have proficiency requirements reduced. Otherwise, no major revisions are recommended.

#### Analysis of the G3ABR40430 Plan of Instruction (POI)

The Plan of Instruction (POI) for course G3ABR40430, dated June 1980, was reviewed for first job and first enlistment 404X0 personnel. Subject matter specialists at the Lowry Technical Training Center matched the job inventory tasks to specific criterion objectives in the POI. Also, each criterion objective was examined based on task difficulty and percent members performing vectors to determine if the survey data supports the major aspects of the basic 404X0 course. Analysis resulted in a conclusion that the G3ABR40430 course provides comprehensive and accurate training for personnel entering the 404X0 career ladder. However, school personnel should closely examine the POI-matched printouts and other pertinent survey data to determine if any minor changes in the course may be needed.

TABLE 33  
TASKS RATED HIGHEST IN DIFFICULTY BY 404X0 PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=279)
A8 DRAFT BUDGET OR FINANCIAL REQUIREMENTS	8.36	8
I475 REMOVE OR REPLACE BETWEEN-THE-LENS SHUTTER COMPONENTS	7.44	18
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	7.37	23
I403 ADJUST ELECTROMECHANICAL SHUTTERS	7.34	12
C73 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	7.32	7
I486 REMOVE OR REPLACE FOCAL PLANE SHUTTERS	7.32	12
C52 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	7.30	9
H376 ISOLATE MALFUNCTIONS IN CONTINUOUS CONTACT PRINTERS	7.29	40
L735 ISOLATE MALFUNCTIONS IN MULTIMEDIA CONTROL CONSOLES	7.27	5
L736 ISOLATE MALFUNCTIONS IN MULTIMEDIA PROGRAMMERS	7.27	5
F160 DESIGN MODIFICATIONS FOR PROCESSORS	7.26	12
J557 ISOLATE MALFUNCTIONS IN ELECTRONIC FOCUS ASSEMBLIES	7.25	4
D84 DEVELOP RESIDENT COURSE CURRICULUM OR CAREER DEVELOPMENT COURSE (CDC) MATERIALS	7.24	2
I505 TIME FOCAL PLANE SHUTTERS	7.21	13
H377 ISOLATE MALFUNCTIONS IN ELECTRONIC CONTACT OR PROJECTION PRINTERS	7.21	31
C72 WRITE CIVILIAN PERFORMANCE RATINGS OR SUPERVISORY APPRASALS	7.20	1
I402 ADJUST BETWEEN-THE-LENS SHUTTERS	7.19	20
I485 REMOVE OR REPLACE FOCAL PLANE SHUTTER COMPONENTS	7.11	14
I407 ADJUST FOCAL PLANE SHUTTERS	7.10	19
G253 ISOLATE MALFUNCTIONS IN DENSITOMETERS	7.09	55
J565 ISOLATE MALFUNCTIONS IN MOTION PICTURE CAMERA SHUTTER ASSEMBLIES	7.02	9
J564 ISOLATE MALFUNCTIONS IN MOTION PICTURE CAMERA AUTOMATIC EXPOSURE CONTROL SYSTEMS	7.01	3
J615 REMOVE OR REPLACE SHUTTLE ASSEMBLIES	7.01	8
B29 DIRECT MOBILITY EXERCISES	7.00	4
F161 FABRICATE MODIFICATIONS FOR PROCESSORS	7.00	19
I455 ISOLATE MALFUNCTIONS IN BETWEEN-THE-LENS SHUTTERS	7.00	20
I460 ISOLATE MALFUNCTIONS IN FOCAL PLANE SHUTTERS	7.00	19

TABLE 34  
TASKS RATED AVERAGE IN DIFFICULTY BY 404XO PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=279)
A16 PLAN WORK ASSIGNMENTS	5.05	32
K052 PERFORM OPERATIONAL CHECKS ON LENS ASSEMBLIES	5.05	19
G201 ADJUST PLOTTING TABLES	5.04	9
J523 CLEAN AND LUBRICATE ELECTRICAL DRIVE ASSEMBLIES	5.04	10
F163 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	5.03	58
J491 ADJUST FILM PACK ADAPTERS	5.02	11
J437 INSPECT ELECTROMECHANICAL SHUTTERS	5.02	17
J492 REMOVE OR REPLACE SHEET FILM CAMERA COMPONENTS	5.02	9
J584 PERFORM OPERATIONAL CHECKS ON RACK OVER ASSEMBLIES	5.02	5
D75 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	5.01	15
P96 MAINTAIN STUDY REFERENCE FILES	5.01	8
J424 CLEAN AND LUBRICATE FOCUSING SCALES	5.01	12
J675 ADJUST FILMSTRIP PROJECTORS	5.01	8
L746 ISOLATE MALFUNCTIONS IN SPEAKER SYSTEMS	5.01	8
J551 INSPECT PRISM ASSEMBLIES	5.00	8
J739 ISOLATE MALFUNCTIONS IN RECORD TURNTABLES	5.00	3
M824 PERFORM CORROSION CONTROL ON RELOCATABLE FACILITIES	5.00	25
F159 COORDINATE WITH BCE ON INSTALLATION OR INSPECTION OF BUILDINGS OR FACILITIES	4.99	13
L187 REMOVE OR REPLACE RECORD TURNTABLE COMPONENTS	4.98	2
H498 REMOVE OR REPLACE MOTION PICTURE PRINTERS	4.98	7
G276 ISOLATE MALFUNCTIONS IN WAXERS	4.98	5
G272 ISOLATE MALFUNCTIONS IN VIEWERS	4.97	13
G330 REMOVE OR REPLACE DEHUMIDIFIER COMPONENTS	4.97	3
J556 INSPECT SPEED GOVERNORS	4.97	9
J781 PERFORM OPERATIONAL CHECKS ON MOTION PICTURE CAMERA SHUTTER ASSEMBLIES	4.97	9
L189 CLEAN AND LUBRICATE AUDIO DISTRIBUTION SYSTEMS	4.95	4
J55 ISPECT SHUTTLE ASSEMBLIES	4.95	12

TABLE 35  
TASKS RATED LOWEST IN DIFFICULTY BY 404X0 PERSONNEL

TASKS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=279)
G204 ADJUST SINKS	3.39	38
G223 CLEAN AND LUBRICATE SINKS	3.38	28
K625 CLEAN ELECTRONIC FLASH UNITS	3.38	24
G320 PERFORM OPERATIONAL CHECKS ON TIMERS	3.37	57
K633 INSPECT LENSES	3.36	30
I494 REMOVE OR REPLACE SHEET FILM HOLDERS	3.34	9
L779 REMOVE OR REPLACE MICROPHONES	3.29	5
K622 CLEAN AND LUBRICATE TRIPODS	3.29	18
K636 INSPECT MIRRORS	3.27	25
L764 PERFORM OPERATIONAL CHECKS ON SPEAKER SYSTEMS	3.27	8
K627 CLEAN LENSES	3.26	26
L714 INSPECT MICROPHONES	3.22	7
G304 PERFORM OPERATIONAL CHECKS ON DRY MOUNTING PRESSES	3.19	28
L757 PERFORM OPERATIONAL CHECKS ON RECORD TURNTABLES	3.17	4
G238 INSPECT SINKS	3.17	47
K623 CLEAN BATTERY PACKS	3.16	19
K632 INSPECT CAMERA FILTERS	3.16	18
L713 INSPECT HEADSETS	3.16	7
L719 INSPECT RECORD TURNTABLES	3.16	3
G315 PERFORM OPERATIONAL CHECKS ON SINKS	3.11	38
M813 INSPECT TIRE PRESSURES ON TRANSPORTERS	3.10	23
K637 INSPECT TRIPODS	3.07	23
K628 CLEAN LIGHT ASSEMBLIES	3.06	17
A3 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	2.94	16
K624 CLEAN CAMERA FILTERS	2.87	15
K669 SET UP OR TAKE DOWN TRIPODS	2.75	15

TABLE 36  
404X0 JOBS IN ORDER OF JOB DIFFICULTY INDEX (JDI)

GROUPS	JDI*	ATDPUTS**	AVERAGE NUMBER OF TASKS PERFORMED
CAMERA MAINTENANCE PERSONNEL CLUSTER (N=50)	18.2	4.9	291
AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL INDEPENDENT JOB TYPE (N=6)	13.7	4.9	137
PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL CLUSTER (N=107)	13.5	4.7	169
MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL INDEPENDENT JOB TYPE (N=9)	13.1	5.1	107
QUALITY CONTROL NCOICs INDEPENDENT JOB TYPE (N=6)	12.7	4.9	122
SUPERVISORS CLUSTER (N=19)	12.5	5.3	64
PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL CLUSTER (N=31)	11.5	4.6	137
INSTRUCTORS INDEPENDENT JOB TYPE (N=5)	11.0	5.2	51
JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL INDEPENDENT JOB TYPE (N=9)	8.3	4.7	61
MOBILITY LABORATORY MAINTENANCE PERSONNEL INDEPENDENT JOB TYPE (N=7)	8.2	4.7	65
MAINTENANCE SCHEDULERS INDEPENDENT JOB TYPE (N=5)	6.7	5.0	16

\* RELATIVE JOB DIFFICULTY OF SPECIALTY JOBS AS PREDICTED USING A FORMULA DEVELOPED BY RESEARCH OF THE AIR FORCE HUMAN RESOURCES LABORATORY. AVERAGE JOB DIFFICULTY (MEAN) IS SET AT 13.0

\*\* AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT (ATDPUTS) IS CALCULATED USING A FORMULA DEVELOPED BY RESEARCH OF THE AIR FORCE HUMAN RESOURCES LABORATORY.

## COMPARISON TO PREVIOUS SURVEY

A comparisor was made between the results of this survey analysis and the results of the previous Occupational Survey Report, AFPT 90-404-206 dated November 1976. The previous report was a combined report of the 404X0 and 404X1 career fields. The 404X1 career field is not addressed in the present report and no comparison can be made for these personnel.

In comparing DAFSC analyses, it was noted that the 1976 report did not have 40499 or CEM Code 40400 personnel included. As a result of this, comparison can only be made up to the 7-skill level. As could be expected, similar trends were noted concerning supervisory and managerial work, with both reports confirming an increasing amount of job time spent in these areas with advancement beyond the 5-skill level. One difference noted between the two reports concerns the maintenance of still and motion picture cameras. The 1976 report displayed the 5-skill level incumbents as the major still and motion picture camera maintenance personnel, whereas in the present analysis the 3-skill level personnel maintain this equipment to a noticeably higher degree.

Comparison of the career ladder structures found a few additional jobs identified in the present report. These additional job groups were the: 1) Quality Control NCOICs, 2) Instructors, 3) Maintenance Schedulers, and 4) Photographic Support Systems and Audiovisual Equipment Maintenance Personnel. The other job groups roughly corresponded to the job groups identified in the 1976 report.

As illustrated in Table 37, job satisfaction indices revealed somewhat higher satisfaction for personnel in the 1980 data. Whereas only 40 percent of the Audiovisual Equipment Technicians in the 1976 report found their job interesting, 100 percent of the Audiovisual Equipment Maintenance Personnel independent job type in the present report found their job interesting. This difference could be explained by the broader nature of the present Audiovisual Maintenance job with members performing an average of 137 tasks as compared to only 49 for the 1976 Audiovisual Equipment Technicians. Mobility Laboratory Maintenance Personnel in the present survey were another group who described their job as more interesting than a similar group in the previous survey. As did most of the job groups, the 1980 sample of 404X0 personnel in various enlistment groups found their job more interesting than did the 1976 sample. This is evidenced by 70 percent of the 1980 first enlistment personnel in the sample as compared to only 59 percent in the 1976 sample finding their job interesting. In general, 404X0 incumbents express greater satisfaction with their job presently than they did in 1976.

TABLE 37

COMPARISON OF JOB SATISFACTION BETWEEN 1976 AND  
1981 404X0 RESPONDENTS

<u>PERCENT FINDING JOB INTERESTING</u>	<u>1976</u> <u>REPORT</u>	<u>1981</u> <u>REPORT</u>
TOTAL SAMPLE:	71%	77%
3-SKILL LEVEL PERSONNEL:	50%	81%
5-SKILL LEVEL PERSONNEL:	69%	73%
7-SKILL LEVEL PERSONNEL:	83%	90%
FIRST ENLISTMENT PERSONNEL:	59%	70%
AUDIOVISUAL EQUIPMENT MAINTENANCE GROUP:	40%	100%
MOBILITY LABORATORY MAINTENANCE GROUP:	40%	86%

## IMPLICATIONS

The Precision Imagery and Audiovisual Media Maintenance career ladder is heterogeneous in nature, with a spectrum of diverse jobs differing mainly in the area of equipment maintained. The major types of equipment which distinguished job groups were cameras, audiovisual systems, processors, printers, support systems, and mobility laboratories. Overall, individuals clustered into different job groups and could be differentiated according to the equipment maintained.

There were some differences found in the area of equipment maintained according to major command. While all MAJCOMs spent the greatest amount of their time maintaining support systems, there was command specific emphasis in other duty areas. SAC, TAC, and USAFE led the other commands in support systems and processor maintenance; ATC and MAC maintained camera systems to a higher degree than the other MAJCOMs; TAC and USAFE spent the only significant amount of time maintaining relocatable facilities; and ATC spent noticeably more time in the area of training. The MAJCOM differences are supported as well by the composition of the job groups (see Table 24), with the systems maintained by the job groups correlating with MAJCOM concentrations in that job group. Job satisfaction indices also revealed some differences between these MAJCOM groups with ATC personnel finding their job the least interesting.

Concerning the DAVA/AAVS issue, survey data suggests that personnel in the AAVS stationed at Norton who participated in the survey do not perform a unique job from other 404X0 personnel. This is manifest by the fact that the Norton AAVS personnel did not form a single job group but were scattered among the different job groups. The DAVA issue could not be properly addressed since no respondents in the survey reported the DAVA as their organization.

Generally, incumbents in the present 404X0 career ladder find their job more interesting than they did in 1976. Some of the jobs in the career field were broadened, which could account for some increased job interest. Some new jobs were also identified from the 1980 data which were not identified in the previous report. These new jobs could possibly be a factor in the increased job interest reported.

APPENDIX A

### Job Type Descriptions

Listed below are brief descriptions of the job types identified in the Precision Imagery and Audiovisual Media Maintenance career ladder structure. Generally, the job types within each cluster vary according to the emphasis placed on the maintenance of the systems which characterize the cluster. The Supervisors cluster is an exception, with job types differentiating on the basis of the supervisory responsibilities. The job types within the Camera Maintenance Personnel cluster are fairly heterogeneous, with the main differentiating factor being the type of camera maintained. Job types comprising the Photographic Support Systems and Audiovisual Equipment Maintenance Personnel cluster were more homogeneous, with the major difference being the area of maintenance emphasis. The Photographic Support Systems and Processor/Printer Maintenance Personnel cluster, on the other hand, has two distinctly different job types and three job types that differ mostly due to different areas of maintenance emphasis. For additional information, the tables in Appendix A reveal various duty, background, and job satisfaction data for all of the job types identified. Appendix B contains a listing of representative tasks for these job types.

#### Supervisors Cluster

Two job types were identified in this cluster: Administrative Line Supervisors and Higher Management Supervisors. Brief descriptions of each job type are presented below. For further information, reference Tables A2, A4, and A6 in Appendix A. Tables B2 and B3 give representative tasks for these job types respectively.

Ia. ADMINISTRATIVE LINE SUPERVISORS (GRP051). Comprised of 7- and 5-skill level personnel, this group has responsibilities in the supervisory and administrative areas, with administrative duties absorbing 32 percent of their time. Fifteen percent of the job time of these incumbents was spent on technical duties. Supervision was their main concern however, with 81 percent of these individuals reporting that they supervise others. Eighty-six percent of this group found their job interesting, and 100 percent felt their training was well utilized.

Ib. MANAGERS (GRP099). With 11 members, this was the largest of the two job types within this cluster. These individuals are the higher level managers of their organizations, with almost none of their time spent on technical aspects of the job. With an average grade of E-7 and an average time in service of 214 months, these personnel are the most senior in the career ladder. Eighty-two percent of these incumbents found their job interesting.

#### Camera Maintenance Personnel Cluster

This cluster contains three job types: Photographic Support Systems, Still Camera and Audiovisual Equipment Maintenance Personnel; Motion Picture Camera Maintenance Personnel; and Still Camera Maintenance Personnel. As the job type names suggest, the main differentiating factor in these job types is the type of camera(s) maintained. Tables A2, A4, and A6 in Appendix A give more information about these groups.

IIa. PHOTOGRAPHIC SUPPORT SYSTEMS, STILL CAMERA, AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP106). The 23 incumbents making up this job type maintain support systems such as print washers and dryers as well as audiovisual systems and still camera systems. They perform an average of 311 tasks, the second largest average number of tasks performed by any group in the career ladder. Fifty-seven percent of these individuals were assigned to overseas locations. None of the members of this group found their job dull, with 96 percent reporting that their talents were utilized fairly well or better. See Table B8 for a listing of representative tasks for this group.

IIb. MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP137). The maintenance of general and motion picture camera systems is the concern of the 11 individuals in this job type. These incumbents have the broadest job in the career ladder, with members performing an average of 377 tasks. Table B9 gives a listing of representative tasks for these personnel, 73 percent of whom described their job as interesting. As a possible result of the extent of their job, this group had the highest job difficulty index (JDI) of any group in the career ladder. The average Task Difficulty per unit time spent (ATDPUTS) was not the highest, however, leading to a possible conclusion that the wide range of the job is what makes it so difficult.

IIc. STILL CAMERA MAINTENANCE PERSONNEL (GRP073). The six members of this group specialize in the maintenance of still camera systems. With 83 percent of the individuals in their first enlistment and members averaging only 40 months in the service, this is one of the most junior groups in the career ladder. Eighty-three percent describe their job as interesting, but only 67 percent feel their talents and training are utilized. Table B10 gives a list of representative tasks for these personnel.

#### Photographic Support Systems and Audiovisual Equipment Maintenance Personnel Cluster

This cluster was comprised of two job types: the Support Systems and Audiovisual Equipment Maintenance Personnel, and the Audiovisual Equipment and Support Systems Maintenance Personnel. As could be inferred from the job type names, the major difference between these job types was the emphasis placed on the two major areas of maintenance. The Support Systems and Audiovisual Equipment Maintenance Personnel spent more time on Support Systems; whereas the Audiovisual Equipment and Support Systems Maintenance Personnel concentrated more on Audiovisual Systems Maintenance. Tables A2, A4, and A6 in Appendix A provides information on these job types. Tables B12 and B13 give representative tasks for these groups respectively.

IIIa. SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP062). The 21 members of this job type concentrate on the maintenance of support systems such as print washers and dryers. Audiovisual systems such as projectors are also maintained by these personnel, but to a lesser degree. Fifty-two percent of these individuals were in their first enlistment and only 57 percent of them found their job interesting. Forty-three percent were unsatisfied with the utilization of their

training and only 62 percent felt their talents were utilized fairly well or better.

IIIb. AUDIOVISUAL EQUIPMENT AND SUPPORT SYSTEMS MAINTENANCE PERSONNEL (GRP057). The maintenance of audiovisual systems, especially projectors, is the main focus of these personnel, with support systems maintained to a lesser extent. Four of the eight members in this group, or 50 percent, were in their first enlistment. All members were stationed within the CONUS and had either a 3- or 5-skill level DAFSC. Seventy-five percent of these individuals found their job interesting. The maintenance of support systems as well as the broader nature of the job, this group performed an average of 100 tasks, differentiated these personnel from the Audiovisual Maintenance Independent Job Type (see Career Ladder Structure of this report).

Photographic Support Systems and Processor/Printer  
Maintenance Personnel Cluster

This cluster had five job types in it: Mobile Facilities, Support Systems, Processor/Printer Maintenance Personnel; Support Systems and Processor/Printer Maintenance Personnel; Support Systems and Printer/Processor Maintenance Personnel; Support Systems and Processor Maintenance Personnel; and Support Systems and Processor Technician-Supervisors. All job types within this cluster had a common core of Support Systems and Processor maintenance. Printer maintenance and emphasis on the maintenance of certain areas over others provided the basis for differentiation. Tables A1, A3, and A5 provide information about the job types in this cluster.

IVa. MOBILE FACILITIES, SUPPORT SYSTEMS, AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP157). With 39 members, this is the largest job type that was identified in the career ladder. Processor Maintenance is a major part of this job, as is the maintenance of mobile facilities; and many of the support systems maintained are closely tied to processors. Unlike the Mobile Laboratory Maintenance Personnel Independent Job Type discussed in the CAREER LADDER STRUCTURE section of this report, individuals in this job type worked almost exclusively on WS 430 mobile facilities. Most members reported working with Delaware Titlers and Richards Light Tables and many of the individuals were also members of a TRS organization. Job satisfaction information was not impressive for these personnel with 64 percent finding their job interesting, 62 percent feeling their talents were utilized, and only 59 percent feeling their training was utilized fairly well or better. Fifty-six percent of these personnel were in their first enlistment and 49 percent were stationed overseas. Thirty-six of the individuals reported a 5-skill level DAFSC. Table B15 gives representative tasks for this job type.

IVb. SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL (GRP155). The 24 members of this job type concentrated on processor and printer maintenance with most of the support systems maintained being related to processors. These individuals performed an average of 211 tasks and had an average time in service of 83 months; these factors differentiated this group from the more limited job of the Junior Photographic

Support Systems and Processor/Printer Maintenance Personnel Independent Job Type (see CAREER LADDER STRUCTURE SECTION of this report). Eighty-eight percent of these individuals reported their job as interesting and 100 percent reported their talents as being utilized fairly well or better. Ninety-two percent also felt their training was being fairly well or better utilized. Representative tasks for this group are displayed in Table B16.

IVc. SUPPORT SYSTEMS AND PRINTER/PROCESSOR MAINTENANCE (GRP109). The 11 personnel comprising this group primarily maintained printers, with processors maintained to a lesser extent and many of the support systems maintained relating to processors. Fifty-five percent of these incumbents reported assignments overseas. Seventy-three percent of the group found their job interesting, but only 64 percent felt their talents were utilized fairly well or better. Table B17 gives representative tasks for the group.

IVd. SUPPORT SYSTEMS AND PROCESSOR MAINTENANCE PERSONNEL (GRP095). This 12 member job type emphasized mainly Processor maintenance. Printers were maintained to a lesser degree and many of the support systems maintained were related to processor systems. Mobility laboratories were also maintained to a noticeable degree by these personnel, but no single facility of specialization was noted. Ninety-two percent of these individuals found their job interesting, with 67 percent of the personnel assigned overseas. With a Job Difficulty Index (JDI) of 10.0 and an Average Task Difficulty per unit time spent (ATPUTS) of 4.6, these individuals had the job rated the easiest of all job types. Fifty percent of these individuals were in their first enlistment. Table B18 gives representative tasks for this job type.

IVe. SUPPORT SYSTEMS AND PROCESSOR TECHNICIAN-SUPERVISORS (GRP066). The 11 members of this group had a job consisting of a combined emphasis on both supervisory and technical functions. These individuals function at a firstline supervisory level with a lot of concentration on administrative functions and lower-level supervisory duties. The technical aspect of their job deals mainly with the maintenance of processors and processor-related support systems. None of these individuals are in their first enlistment and 82 percent of them report supervising other personnel. Fifty-five percent of these incumbents were stationed overseas. Seventy-three percent of this group found their job interesting. Table B19 displays the representative tasks of this job type.



TABLE A2  
COMPARISON OF JOB SATISFACTION INDICES FOR JOB GROUPS WITHIN THE SUPERVISORS; CAMERA MAINTENANCE, PERSONNEL;  
AND PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL CLUSTERS

SUPERVISORS CLUSTER		CAMERA MAINTENANCE PERSONNEL CLUSTER		PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL CLUSTER		PHOTOGRAPHIC SUPPORT SYSTEMS - AUDIOVISUAL EQUIPMENT AND SUPPORT SYSTEMS - AUDIOVISUAL AND SUPPORT SYSTEMS - AUDIOVISUAL AND EQUIPMENT	
ADMINISTRATIVE LINE SUPERVISORS (GRP051)	HIGHEST MANAGEMENT SUPERVISORS (GRP088)	PHOTOGRAPHIC SUPPORT SYSTEMS STILL CAMERA, AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP106)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP137)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP062)	PHOTOGRAPHIC SUPPORT SYSTEMS - AUDIOVISUAL PERSONNEL (GRP057)	SUPPORT SYSTEMS - AUDIOVISUAL PERSONNEL (GRP062)
<u>I FIND MY JOB:</u>							
DULL	0	9	0	9	0	19	12
SO-SO	14	9	4	9	17	24	13
INTERESTING	86	82	96	73	83	57	75
NOT REPORTED	0	0	0	9	0	0	0
<u>MY TALENTS ARE UTILIZED:</u>							
LITTLE OR NOT AT ALL	14	18	4	18	33	38	12
FAIRLY WELL OR BETTER	86	82	96	82	67	62	88
NOT REPORTED	0	0	0	0	0	0	0
<u>MY TRAINING IS UTILIZED:</u>							
LITTLE OR NOT AT ALL	0	18	22	9	17	43	12
FAIRLY WELL OR BETTER	100	73	78	82	67	57	85
NOT REPORTED	0	9	0	9	16	0	0

TABLE A,  
BACKGROUND INFORMATION FOR 546 GUARDS WITHIN THE PHOTOGRAFIC SUPPORT GROUP AND TECHNICAL PRIVATE MAINTENANCE PERSONNEL CLUSTER

	NUMBER IN GROUP	NUMBER IN GROUP	NUMBER IN GROUP	NUMBER IN GROUP
NUMBER IN GROUP	39	24	11	11
PERCENT OF SAMPLE	14%	9%	4%	4%
PERCENT LOCATED OVERSEAS	49%	41%	55%	55%
DAFSN DISTRIBUTION				
40440	1	4	0	2
40450	36	14	7	9
40470	2	6	4	1
40490	0	0	0	0
CEM CODE: 40406	0	0	0	0
AVERAGE GRADE	4.0	4.3	4.7	4.0
AVERAGE TIME IN CAREER FIELD	58	68	71	51
AVERAGE TIME IN SERVICE	64	83	113	65
PERCENT IN FIRST ENLISTMENT	56%	33%	36%	50%
PERCENT SUPERVISING OTHERS	31%	42%	46%	8%
AVERAGE NUMBER OF TASKS PERFORMED	186	211	120	100
AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT (ADPOTS)	4.6	4.7	4.7	4.6
JOB DIFFICULTY INDEX (JDI)	14.0	14.8	11.5	10.0

TABLE A4  
KEY INFORMATION FOR JOB GROUPS WITHIN THE SUPERVISORS, CAMERA MAINTENANCE PERSONNEL, AND PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL CLUSTERS

SUPERVISORS CLUSTER		CAMERA MAINTENANCE CLUSTER		PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL		AUDIOVISUAL EQUIPMENT SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL		PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL	
ADMINISTRATIVE LINE SUPERVISORS (GRP051)	HIGHER MANAGEMENT SUPERVISORS (GRP099)	PHOTOGRAPHIC SUPPORT SYSTEMS, STILL CAMERA, AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP106)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP137)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP057)	STILL CAMERA MAINTENANCE PERSONNEL (GRP061)	PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP073)	STILL CAMERA MAINTENANCE PERSONNEL (GRP061)	PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP057)
NUMBER IN GROUP	7	11	23	11	6	21	21	6	8
PERCENT OF SAMPLE	3%	4%	8%	4%	2%	32	32	5%	5%
PERCENT LOCATED OVERSEAS	43%	27%	57%	27%	40%	0	0	0	0
DAFSC DISTRIBUTION									
40430	0	0	3	1	4	3	3	1	1
40450	3	2	16	9	1	16	16	0	0
40470	4	3	4	1	1	3	3	0	0
40499	0	5	0	0	0	0	0	0	0
CEM CODE 40400	0	1	0	0	0	0	0	0	0
AVERAGE GRADE	5.7	7.0	4.8	4.0	3.0	4.0	4.0	3.0	3.0
AVERAGE TIME IN CAREER FIELD	105	195	91	63	36	61	61	38	38
AVERAGE TIME IN SERVICE	150	214	112	76	40	71	56	56	56
PERCENT IN FIRST ENLISTMENT	14%	18%	13%	45%	33%	42%	42%	30%	30%
PERCENT SUPERVISING OTHERS	81%	64%	35%	9%	33%	5%	5%	13%	13%
AVERAGE NUMBER OF TASKS PERFORMED	62	66	311	377	159	157	157	157	157
AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT (AVERAGES)	5.0	5.5	4.8	5.0	5.2	4.5	4.5	4.5	4.5
JOB DIFFICULTY INDEX (IDI)	10.2	14.3	18.1	19.6	17.6	12.0	12.0	12.0	12.0

TABLE A5  
RELATIVE PERCENT TIME SPENT IN DUTIES BY TOP THES  
PROFESSIONAL SUPPORT SYSTEMS AND EQUIPMENT MAINTENANCE PERSONNEL

DUTY/ TITLE	SUPPORT SYSTEMS AND EQUIPMENT MAINTENANCE PERSONNEL (N=39)			SUPPORT SYSTEMS AND EQUIPMENT MAINTENANCE PERSONNEL (N=24)		
	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=19)	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=11)	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=12)	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=11)	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=12)	TECHNICAL FACILITIES, SUCH AS SYSTEMS AND PROCESSOR, OR EQUIP- MENT MAINTENANCE PERSONNEL (N=12)
A. ORGANIZING AND PLANNING	1	2	1	2	1	1
B. DIRECTING AND IMPLEMENTING	2	2	2	2	1	1
C. INSPECTING AND EVALUATING	1	1	1	2	1	3
D. TRAINING	2	2	2	2	1	4
E. PERFORMING ADMINISTRATIVE FUNCTIONS	7	6	13	8	17	17
F. INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	20	19	14	26	17	17
G. INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	40	48	43	45	18	18
H. MAINTAINING PRINTER SYSTEMS	12	14	17	7	6	6
I. MAINTAINING STILL CAMERA SYSTEMS	3	3	3	3	3	3
J. MAINTAINING MOTION PICTURE CAMERAS	3	3	3	4	3	3
K. MAINTAINING GENERAL CAMERA EQUIPMENT	3	1	1	1	1	1
L. MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	*	3	1	2	2	4
M. MAINTAINING MOBILITY LABORATORIES	14	*	*	7	7	7

\* DENOTES LESS THAN ONE PERCENT

TABLE A6  
RELATIVE PERCENT TIME SPENT ON DUTIES BY JOB TYPES

SUPERVISORS CLUSTER	CAMERA MAINTENANCE CLUSTER			PHOTOGRAPHIC SUPPORT SYSTEMS, STILL CAMERA, AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP099)			SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT SUPPORT SYSTEMS MAINTENANCE PERSONNEL (GRP062)			PHOTOGRAPHIC SUPPORT SYSTEMS, STILL CAMERA, AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP106)			SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT SUPPORT SYSTEMS MAINTENANCE PERSONNEL (GRP073)		
	DUTY TITLE	ADMINISTRATIVE LINE SUPERVISORS (GRP051)	HIGHER MANAGEMENT SUPERVISORS (GRP099)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP106)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP106)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP106)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP106)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)	MOTION PICTURE CAMERA MAINTENANCE PERSONNEL (GRP106)	STILL CAMERA MAINTENANCE PERSONNEL (GRP073)		
A ORGANIZING AND PLANNING	16	25	2	1	*	*	1	*	*	2	*	2	*	1	
B DIRECTING AND IMPLEMENTING	18	27	2	1	*	*	2	*	*	1	*	1	*	1	
C INSPECTING AND EVALUATING	11	27	2	*	*	*	7	*	*	1	*	1	*	*	
D TRAINING	8	9	1	*	*	*	7	*	*	1	*	1	*	*	
E PERFORMING ADMINISTRATIVE FUNCTIONS	32	10	8	2	2	4	4	4	10	6	6	6	6	6	
F INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING SYSTEMS	4	*	9	6	6	6	6	6	12	22	22	22	22	22	
G INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	8	*	*	21	17	11	11	11	33	25	25	25	25	25	
H MAINTAINING PRINTER SYSTEMS	1	*	*	6	4	4	4	4	11	5	5	5	5	5	
I MAINTAINING STILL CAMERA SYSTEMS	*	*	*	18	18	50	50	50	6	2	2	2	2	2	
J MAINTAINING MOTION PICTURE CAMERAS	*	*	*	4	21	1	1	1	1	1	1	1	1	1	
K MAINTAINING GENERAL CAMERA EQUIPMENT	*	*	*	11	13	17	17	17	8	2	2	2	2	2	
L MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	2	*	14	17	*	*	*	*	14	33	33	33	33	*	
M MAINTAINING MOBILITY LABORATORIES	*	1	*	*	*	*	*	*	*	*	*	*	*	*	

\* DENOTES LESS THAN ONE PERCENT

APPENDIX B

TABLE B1  
SUPERVISORS - GRP033 (N=19)  
CLUSTER  
RELATIVE PERCENT TIME SPENT ON DUTIES

<u>DUTY</u>	<u>TITLE</u>	<u>RELATIVE PERCENT TIME SPENT</u>
B	DIRECTING AND IMPLEMENTING	23
A	ORGANIZING AND PLANNING	21
C	INSPECTING AND EVALUATING	20
E	PERFORMING ADMINISTRATIVE FUNCTIONS	19
D	TRAINING	9
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	4
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	2

REPRESENTATIVE TASKS

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	95
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	95
B47 WRITE CORRESPONDENCE	89
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	89
C54 EVALUATE CORROSION CONTROL PROGRAMS	84
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	84
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	79
B36 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	79
C67 PREPARE APRs	74
A5 DETERMINE WORK PRIORITIES	74
B28 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	74
C56 EVALUATE INSPECTION REPORTS OR PROCEDURES	74
A10 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	74
C49 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	74
A20 SCHEDULE LEAVES OR PASSES	74
A17 PREPARE JOB DESCRIPTIONS	74
A16 PLAN WORK ASSIGNMENTS	68
B26 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	68
B30 DIRECT OR IMPLEMENT OJT PROGRAMS	68

TABLE B2  
TASKS PERFORMED BY ADMINISTRATIVE LINE SUPERVISORS (GRP051)

TASK	PERCENT MEMBERS PERFORMING
E136 REQUISITION SUPPLIES OR EQUIPMENT	100
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	100
E115 MAKE ENTRIES ON ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	86
C54 EVALUATE CORROSION CONTROL PROGRAMS	86
A5 DETERMINE WORK PRIORITIES	86
E105 LOCATE PART OR STOCK NUMBERS	86
A16 PLAN WORK ASSIGNMENTS	86
E141 REVIEW SUPPLY CONTROL LOG FORMS (AF FORM 2413)	86
B37 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	86
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	86
C67 PREPARE APRs	86
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	86
B47 WRITE CORRESPONDENCE	86
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	86
E104 ATTACH EQUIPMENT STATUS TAGS	86
E118 MAKE ENTRIES ON NON-NSN REQUISITION (MANUAL) FORMS (DD FORM 1348-6)	71
E128 MAKE ENTRIES ON SUPPLY CONTROL LOG FORMS (AF FORM (AF FORM 2413)	71
B44 SUPERVISE PRECISION IMAGERY AND AUDIOVISUAL MEDIA MAINTENANCE SPECIALISTS (AFSC 40450)	71
A10 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	71
E143 SCHEDULE WORK ASSIGNMENTS	71

TABLE B3  
TASKS PERFORMED BY HIGHER MANAGEMENT SUPERVISORS (GRP099)

TASK	PERCENT MEMBERS PERFORMING
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI) OR STANDARD OPERATING PROCEDURES (SOP)	100
B47 WRITE CORRESPONDENCE	100
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	100
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	100
B46 UPDATE LOCAL OPERATING INSTRUCTIONS	100
B35 INITIATE PERSONNEL ACTION REQUESTS	100
A17 PREPARE JOB DESCRIPTIONS	100
B23 CONDUCT STAFF MEETINGS	91
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	91
B36 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	91
C58 EVALUATE MAINTENANCE MANAGEMENT OF SUBORDINATE OFFICES OR SUPPLIES	91
A4 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	91
C49 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	91
C56 EVALUATE INSPECTION REPORTS OR PROCEDURES	91
B28 DIRECT MAINTANANCE OR UTILIZATION OF EQUIPMENT	91
A1 ACT AS TRAINING ADVISOR AT STAFF LEVEL	91
C55 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	82
C54 EVALUATE CORROSION CONTRCL PROGRAMS	82
C64 EVALUATE SUGGESTIONS	82
A7 DEVELOP WORK METHODS OR PROCEDURES	82
A12 PLAN BRIEFINGS	82

TABLE B4  
 QUALITY CONTROL NCOICs - GRP056 (N=6)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT ON DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
E	PERFORMING ADMINISTRATIVE FUNCTIONS	20
C	INSPECTING AND EVALUATING	14
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	11
I	MAINTAINING STILL CAMERA SYSTEMS	10
A	ORGANIZING AND PLANNING	9
B	DIRECTING AND IMPLEMENTING	9
J	MAINTAINING MOTION PICTURE CAMERAS	7
D	TRAINING	5
L	MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	5
K	MAINTAINING GENERAL CAMERA EQUIPMENT	4
H	MAINTAINING PRINTER SYSTEMS	3
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	2

REPRESENTATIVE TASKS

TASK	PERCENT MEMBERS PERFORMING
E120 MAKE ENTRIES ON QUALITY CONTROL INSPECTION SUMMARY FORMS (AF FORM 2420)	100
E126 MAKE ENTRIES ON ROUTING AND REVIEW OF QUALITY CONTROL REPORT FORMS (AF FORM 2419)	100
C54 EVALUATE CORROSION CONTROL PROGRAMS	100
C59 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	100
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	100
E131 MAKE ENTRIES ON TECHNICAL ORDER DISTRIBUTION RECORD FORMS (AFTO FORM 110)	100
E133 PARTICIPATE IN STAFF MEETINGS	100
F162 INSPECT PROCESSORS	100
A9 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	100
E132 MAKE ENTRIES ON TODO/TECHNICAL ORDER PUBLICATIONS REQUIREMENTS TABLE FORMS (AFTO FORM 187)	100
H375 INSPECT PROJECTION PRINTERS	100
G227 INSPECT DENSITOMETERS	100
G234 INSPECT PRINT DRYERS	100
G239 INSPECT SLIDE MOUNTERS	100
H373 INSPECT MANUAL CONTACT PRINTERS	100
G241 INSPECT SPLICERS	100
G232 INSPECT PH METERS	100
G235 INSPECT PRINT WASHERS	100
G243 INSPECT TIMERS	100
A7 DEVELOP WORK METHODS OR PROCEDURES	83
C56 EVALUATE INSPECTION REPORTS OR PROCEDURES	83

TABLE B5

INSTRUCTORS - GRP039 (N=5)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT ON DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
D	TRAINING	43
B	DIRECTING AND IMPLEMENTING	13
E	PERFORMING ADMINISTRATIVE FUNCTIONS	12
L	MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	9
A	ORGANIZING AND PLANNING	7
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	7
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	5
M	MAINTAINING MOBILITY LABORATORIES	2
C	INSPECTING AND EVALUATING	1

## REPRESENTATIVE TASKS

TASK	PERCENT MEMBERS PERFORMING
D78 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	100
D74 ADMINISTER TESTS	100
D101 SCORE TESTS	100
D86 DEVELOP TRAINING AIDS	100
D85 DEVELOP TESTS	100
D80 COUNSEL TRAINEES ON TRAINING PROGRESS	100
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	100
D81 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	80
D102 WRITE TEST QUESTIONS	80
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	80
D92 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS	60
D95 EVALUATE TRAINING METHODS AND TECHNIQUES	60
D100 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	60
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	60
D97 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	60
E129 MAKE ENTRIES ON SYSTEM OR EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244 OR 245)	60
D76 ATTEND SPECIAL TRAINING COURSES OR BRIEFINGS	60
A7 DEVELOP WORK METHODS OR PROCEDURES	60
B36 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	60
D82 DETERMINE OJT TRAINING REQUIREMENTS	60
A19 REVIEW UNIT EMERGENCY OR DISASTER PLANS	60
B28 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	60
E105 LOCATE PART OR STOCK NUMBERS	60

TABLE B6

MAINTENANCE SCHEDULERS - GRP036 (N=5)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT OF DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
E	PERFORMING ADMINISTRATIVE FUNCTIONS	45
B	DIRECTING AND IMPLEMENTING	34
A	ORGANIZING AND PLANNING	10
C	INSPECTING AND EVALUATING	7
D	TRAINING	4

## REPRESENTATIVE TASKS

TASK	PERCENT MEMBERS PERFORMING
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	100
E106 MAINTAIN MAINTENANCE RECORD FILES	100
A5 DETERMINE WORK PRIORITIES	100
B26 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	80
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	80
E135 PREPARE MAINTENANCE ANALYSIS REPORTS	60
B46 UPDATE LOCAL OPERATING INSTRUCTIONS	60
E143 SCHEDULE WORK ASSIGNMENTS	40
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	40
E138 REVIEW DAILY DOCUMENT REGISTERS	40
B27 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	40
E139 REVIEW MASTER IDENTIFICATION LISTINGS	40
A16 PLAN WORK ASSIGNMENTS	40
C48 ANALYZE WORKLOAD REQUIREMENTS	40
D76 ATTEND SPECIAL TRAINING COURSES OR BRIEFINGS	40
E107 MAINTAIN TECHNICAL ORDER (TO) OR COMMERCIAL PUBLICATION FILES	40

TABLE B7  
 CAMERA MAINTENANCE - GRP041 (N=50)  
 CLUSTER  
 RELATIVE PERCENT TIME SPENT ON DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
I	MAINTAINING STILL CAMERA SYSTEMS	21
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	19
L	MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	12
K	MAINTAINING GENERAL CAMERA EQUIPMENT	12
J	MAINTAINING MOTION PICTURE CAMERAS	10
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	8
E	PERFORMING ADMINISTRATIVE FUNCTIONS	6
H	MAINTAINING PRINTER SYSTEMS	5

REPRESENTATIVE TASKS

TASK	PERCENT MEMBERS PERFORMING
I457 ISOLATE MALFUNCTIONS IN FILM ADVANCE MECHANISMS	90
I438 INSPECT FILM ADVANCE MECHANISMS	90
F162 INSPECT PROCESSORS	86
I436 INSPECT BETWEEN-THE-LENS SHUTTERS	86
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	86
I441 INSPECT FOCAL PLANE SHUTTERS	84
K633 INSPECT LENSES	84
G234 INSPECT PRINT DRYERS	84
I444 INSPECT RANGE FINDERS	84
K630 CLEAN MIRRORS	82
I460 ISOLATE MALFUNCTIONS IN FOCAL PLANE SHUTTERS	82
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	82
K639 ISOLATE MALFUNCTIONS IN ELECTRONIC FLASH UNITS	82
K627 CLEAN LENSES	82
L683 ADJUST SLIDE PROJECTORS	82
G202 ADJUST PRINT DRYERS	82
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	82
G312 PERFORM OPERATIONAL CHECKS ON PRINT WASHERS	82
K625 CLEAN ELECTRONIC FLASH UNITS	82
K640 ISOLATE MALFUNCTIONS IN LENS ASSEMBLIES	80

TABLE B8

TASKS PERFORMED BY PHOTOGRAPHIC SUPPORT SYSTEMS, STILL CAMERA, AND  
AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL (GRP106)

TASK	PERCENT MEMBERS PERFORMING
E106 MAINTAIN MAINTENANCE RECORD FILES	100
F234 INSPECT PRINT DRYERS	100
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	100
I457 ISOLATE MALFUNCTIONS IN FILM ADVANCE MECHANISMS	100
G342 REMOVE OR REPLACE PRINT WASHER COMPONENTS	100
G340 REMOVE OR REPLACE PRINT DRYER COMPONENTS	96
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	96
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	96
L683 ADJUST SLIDE PROJECTORS	96
G235 INSPECT PRINT WASHERS	96
G243 INSPECT TIMERS	96
G239 INSPECT SLIDE MOUNTERS	96
H363 ADJUST MANUAL CONTACT PRINTERS	96
G312 PERFORM OPERATIONAL CHECKS ON PRINT WASHERS	96
L701 CLEAN AND LUBRICATE SLIDE PROJECTORS	91
I441 INSPECT FOCAL PLANE SHUTTERS	91
I460 ISOLATE MALFUNCTIONS IN FOCAL PLANE SHUTTERS	91
I438 INSPECT FILM ADVANCE MECHANISMS	91
I436 INSPECT BETWEEN-THE-LENS SHUTTERS	91
I453 ISOLATE MALFUNCTIONS IN APERTURES	91
L796 REMOVE OR REPLACE SOUND MOTION PICTURE PROJECTOR COMPONENTS	87
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	87
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	83
L684 ADJUST SOUND MOTION PICTURE PROJECTORS	83

TABLE B9  
TASKS PERFORMED BY MOTION PICTURE CAMERA  
MAINTENANCE PERSONNEL (GRP137)

TASK	PERCENT MEMBERS PERFORMING
K620 ADJUST LENS ASSEMBLIES	100
K633 INSPECT LENSES	100
K651 OPERATE MOTION ANALYZERS	100
K619 ADJUST APERTURE	100
J643 ISOLATE MALFUNCTIONS IN REWIND MECHANISMS	100
K621 CLEAN AND LUBRICATE REWIND MECHANISMS	100
K640 ISOLATE MALFUNCTIONS IN LENS ASSEMBLIES	100
J555 INSPECT SHUTTLE ASSEMBLIES	100
J615 REMOVE OR REPLACE SHUTTLE ASSEMBLIES	100
J539 INSPECT ELECTRICAL DRIVE ASSEMBLIES	100
J542 INSPECT FILM TAKEUP ASSEMBLIES	100
J576 PERFORM OPERATIONAL CHECKS ON FILM TAKEUP ASSEMBLIES	100
J587 PERFORM OPERATIONAL CHECKS ON SHUTTLE ASSEMBLIES	100
J579 PERFORM OPERATIONAL CHECKS ON MECHANICAL DRIVE ASSEMBLIES	100
J550 ISOLATE MALFUNCTIONS IN FILM TAKEUP ASSEMBLIES	100
J571 ISOLATE MALFUNCTIONS IN SHUTTLE ASSEMBLIES	100
K626 CLEAN LENS ASSEMBLIES	100
K628 CLEAN LIGHT ASSEMBLIES	100
K630 CLEAN MIRRORS	100
K658 REMOVE OR REPLACE LENS ASSEMBLY COMPONENTS	100

TABLE B10  
TASKS PERFORMED BY STILL CAMERA MAINTENANCE PERSONNEL (GRP073)

TASK	PERCENT MEMBERS PERFORMING
I408 ADJUST FOCUSING SCALES	100
I418 CLEAN AND LUBRICATE BETWEEN-THE-LENS SHUTTERS	100
I407 ADJUST FOCAL PLANE SHUTTERS	100
I475 REMOVE OR REPLACE BETWEEN-THE LENS SHUTTER COMPONENTS	100
I460 ISOLATE MALFUNCTIONS IN FOCAL PLANE SHUTTERS	100
I455 ISOLATE MALFUNCTIONS IN BETWEEN-THE-LENS SHUTTERS	100
I415 ADJUST VIEW FINDERS	100
I457 ISOLATE MALFUNCTIONS IN FILM ADVANCE MECHANISMS	100
I505 TIME FOCAL PLANE SHUTTERS	100
I436 INSPECT BETWEEN-THE-LENS SHUTTERS	100
I480 REMOVE OR REPLACE FILM ADVANCE MECHANISMS	100
I423 CLEAN AND LUBRICATE FOCAL PLANE SHUTTERS	100
I402 ADJUST BETWEEN-THE-LENS SHUTTERS	100
I445 INSPECT REWIND MECHANISMS	100
I426 CLEAN AND LUBRICATE RANGE FINDERS	100
I461 ISOLATE MALFUNCTIONS IN FOCUSING SCALES	100
I410 ADJUST RANGE FINDERS	100
I444 INSPECT RANGE FINDERS	100
I487 REMOVE OR REPLACE FOCUSING SCALE COMPONENTS	100
I406 ADJUST FLASH SYNCHRONIZATION MECHANISMS	100

TABLE B11

PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL CLUSTER  
 GRP045 (N=31)  
 RELATIVE PERCENT TIME SPENT ON DUTIES

<u>DUTY</u>	<u>TITLE</u>	<u>RELATIVE PERCENT TIME SPENT</u>
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	30
L	MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	19
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	15
E	PERFORMING ADMINISTRATIVE FUNCTIONS	9
H	MAINTAINING PRINTER SYSTEMS	9
K	MAINTAINING GENERAL CAMERA EQUIPMENT	7
I	MAINTAINING STILL CAMERA SYSTEMS	5
B	DIRECTING AND IMPLEMENTING	2

## REPRESENTATIVE TASKS

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
G234 INSPECT PRINT DRYERS	97
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	94
G235 INSPECT PRINT WASHERS	90
F162 INSPECT PROCESSORS	87
G202 ADJUST PRINT DRYERS	87
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	87
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	87
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	84
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	84
E105 LOCATE PART OR STOCK NUMBERS	84
H375 INSPECT PROJECTION PRINTERS	84
G270 ISOLATE MALFUNCTIONS IN TIMERS	84
L717 INSPECT OVERHEAD PROJECTORS	84
L743 ISOLATE MALFUNCTIONS IN SOUND MOTION PICTURE PROJECTORS	81
G340 REMOVE OR REPLACE PRINT DRYERS COMPONENTS	81
L683 ADJUST SLIDE PROJECTORS	81
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	81
G320 PERFORM OPERATIONAL CHECKS ON TIMERS	81
G312 PERFORM OPERATIONAL CHECKS ON PRINT WASHERS	81
L723 INSPECT SOUND MOTION PICTURE PROJECTORS	77

TABLE B12  
TASKS PERFORMED BY SUPPORT SYSTEMS AND AUDIOVISUAL  
EQUIPMENT MAINTENANCE PERSONNEL (GRP062)

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	100
G340 REMOVE OR REPLACE PRINT DRYER COMPONENTS	100
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	100
G235 INSPECT PRINT WASHERS	100
G312 PERFORM OPERATIONAL CHECKS ON PRINT WASHERS	100
G342 REMOVE OR REPLACE PRINT WASHER COMPONENTS	100
G288 PERFORM CORROSION CONTROL ON PRINT WASHERS	100
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	95
G234 INSPECT PRINT DRYERS	95
L756 PERFORM OPERATIONAL CHECKS ON OVERHEAD PROJECTORS	90
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	86
G315 PERFORM OPERATIONAL CHECKS ON SINKS	86
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	81
L701 CLEAN AND LUBRICATE SLIDE PROJECTORS	81
L683 ADJUST SLIDE PROJECTORS	81
L737 ISOLATE MALFUNCTIONS IN OVERHEAD PROJECTORS	81
F162 INSPECT PROCESSORS	81
L761 PERFORM OPERATIONAL CHECKS ON SOUND MOTION PICTURE PROJECTORS	76
L743 ISOLATE MALFUNCTIONS IN SOUND MOTION PICTURE PROJECTORS	76
H365 ADJUST PROJECTION PRINTERS	76
G243 INSPECT TIMERS	76

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TABLE B13

TASKS PERFORMED BY AUDIOVISUAL EQUIPMENT AND SUPPORT SYSTEMS  
MAINTENANCE PERSONNEL (GRP057)

TASK	PERCENT MEMBERS PERFORMING
L743 ISOLATE MALFUNCTIONS IN SOUND MOTION PICTURE PROJECTORS	100
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	100
L796 REMOVE OR REPLACE SOUND MOTION PICTURE PROJECTOR COMPONENTS	100
L683 ADJUST SLIDE PROJECTORS	100
L684 ADJUST SOUND MOTION PICTURE PROJECTORS	100
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	100
F162 INSPECT PROCESSORS	100
G234 INSPECT PRINT DRYERS	100
L723 INSPECT SOUND MOTION PICTURE PROJECTORS	88
L792 CLEAN AND LUBRICATE SOUND MOTION PICTURE PROJECTORS	88
L795 REMOVE OR REPLACE SOUND MOTION PICTURE PROJECTORS	88
L737 ISOLATE MALFUNCTIONS IN OVERHEAD PROJECTORS	88
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	88
L784 REMOVE OR REPLACE OVERHEAD COMPONENTS	88
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	88
G219 CLEAN AND LUBRICATE HYDROMIXERS	88
G239 INSPECT SLIDE MOUNTERS	75
L717 INSPECT OVERHEAD PROJECTORS	75
G236 INSPECT PROCESSOR PUMPS OR FILTERS	75
G282 PERFORM CORROSION CONTROL ON HYDROMIXERS	75
G205 ADJUST SLIDE MOUNTERS	75

TABLE B12  
TASKS PERFORMED BY SUPPORT SYSTEMS AND AUDIOVISUAL  
EQUIPMENT MAINTENANCE PERSONNEL (GRP062)

TASK	PERCENT MEMBERS PERFORMING
G311 PERFORM OPERATIONAL CHECKS ON PRINT DRYERS	100
G340 REMOVE OR REPLACE PRINT DRYER COMPONENTS	100
G287 PERFORM CORROSION CONTROL ON PRINT DRYERS	100
G235 INSPECT PRINT WASHERS	100
G312 PERFORM OPERATIONAL CHECKS ON PRINT WASHERS	100
G342 REMOVE OR REPLACE PRINT WASHER COMPONENTS	100
G288 PERFORM CORROSION CONTROL ON PRINT WASHERS	100
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	95
G234 INSPECT PRINT DRYERS	95
L756 PERFORM OPERATIONAL CHECKS ON OVERHEAD PROJECTORS	90
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	86
G315 PERFORM OPERATIONAL CHECKS ON SINKS	86
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	81
L701 CLEAN AND LUBRICATE SLIDE PROJECTORS	81
L683 ADJUST SLIDE PROJECTORS	81
L737 ISOLATE MALFUNCTIONS IN OVERHEAD PROJECTORS	81
F162 INSPECT PROCESSORS	81
L761 PERFORM OPERATIONAL CHECKS ON SOUND MOTION PICTURE PROJECTORS	76
L743 ISOLATE MALFUNCTIONS IN SOUND MOTION PICTURE PROJECTORS	76
H365 ADJUST PROJECTION PRINTERS	76
G243 INSPECT TIMERS	76

TABLE B14

PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE  
 PERSONNEL - GRP040 (N=107)  
 CLUSTER  
 RELATIVE PERCENT TIME SPENT ON DUTIES

<u>DUTY</u>	<u>TITLE</u>	<u>RELATIVE PERCENT TIME SPENT</u>
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	40
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	20
H	MAINTAINING PRINTER SYSTEMS	12
E	PERFORMING ADMINISTRATIVE FUNCTIONS	9
M	MAINTAINING MOBILITY LABORATORIES	7
B	DIRECTING AND IMPLEMENTING	3
A	ORGANIZING AND PLANNING	2
D	TRAINING	2

## REPRESENTATIVE TASKS

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	95
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	93
F162 INSPECT PROCESSORS	91
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	90
G195 ADJUST DENSITOMETERS	90
G253 ISOLATE MALFUNCTIONS IN DENSITOMETERS	89
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	89
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	89
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	88
G227 INSPECT DENSITOMETERS	88
G332 REMOVE OR REPLACE DENSITOMETER COMPONENTS	88
E105 LOCATE PART OR STOCK NUMBERS	86
G303 PERFORM OPERATIONAL CHECKS ON DENSITOMETERS	86
G236 INSPECT PROCESSOR PUMPS OR FILTERS	85
G234 INSPECT PRINT DRYERS	85
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	85
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	84
F168 ISOLATE MALFUNCTIONS IN TEMPERATURE CONTROL SYSTEMS	84
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	84
F156 CONNECT OR DISCONNECT WATER MIXING VALVES	84

TABLE B15

TASKS PERFORMED BY MOBILE FACILITIES, SUPPORT SYSTEMS, AND PROCESSOR/  
PRINTER MAINTENANCE PERSONNEL (GRP157)

<u>BASE</u>		<u>PERCENT MEMBERS PERFORMING</u>
F180	PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	100
G234	INSPECT PRINT DRYERS	100
G282	PERFORM CORROSION CONTROL ON HYDROMIXERS	97
G274	ISOLATE MALFUNCTIONS IN TITLERS	97
F162	ADJUST DENSITYMETERS	97
	PERFORM OPERATIONAL CHECKS ON HYDROMIXERS	97
G35	PERFORM OPERATIONAL CHECKS ON PROCESSOR PUMPS OR FILTERS	97
F151	CONNECT OR DISCONNECT INTERNAL PLUMBING	97
F361	ADJUST CONTINUOUS CONTACT PRINTERS	97
	INSPECT PRINT DRYERS	97
F152	LEVEL RELOCATABLE FACILITIES	95
F212	INSTALL OR REMOVE RELOCATABLE FACILITY PASSAGEWAYS	95
G270	ISOLATE MALFUNCTIONS IN TIMERS	95
M826	PERFORM CORROSION CONTROL ON RELOCATABLE FACILITIES	92
F162	INSPECT PROCESSORS	92
F182	PERFORM OPERATIONAL CHECKS ON PROCESSORS	92
M811	INSPECT HYDRAULIC SYSTEMS ON TRANSPORTERS	92
M813	INSPECT TIRE PRESSURES ON TRANSPORTERS	92
M830	REMOVE OR INSTALL THREADED INSERTS	90
H365	CLEAN AND LUBRICATE CONTINUOUS CONTACT PRINTERS	90
H382	PERFORM CORROSION CONTROL ON CONTINUOUS CONTACT PRINTERS	90

TABLE B16

TASKS PERFORMED BY SUPPORT SYSTEMS AND PROCESSOR/  
PRINTER MAINTENANCE PERSONNEL (GRP155)

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	100
G236 INSPECT PROCESSOR PUMPS OR FILTERS	100
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	100
G203 ADJUST SENSITOMETERS	100
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	96
G253 ISOLATE MALFUNCTIONS IN DENSITOMETERS	96
F164 ISOLATE MALFUNCTIONS IN AIR TUBE DRYER SYSTEMS	96
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	96
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	96
H373 ISOLATE MANUAL CONTACT PRINTERS	96
G332 REMOVE OR REPLACE DENSITOMETER COMPONENTS	96
F171 ISOLATE MALFUNCTIONS IN WATER TEMPERATURE MIXING VALVES	96
G243 INSPECT TIMERS	96
H370 CLEAN AND LUBRICATE PROJECTION PRINTERS	96
F162 INSPECT PROCESSORS	92
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	92
G197 ADJUST HYDROMIXERS	92
G237 INSPECT SENSITOMETERS	92
H378 ISOLATE MALFUNCTIONS IN MANUAL CONTACT PRINTERS	92
H363 ADJUST MANUAL CONTACT PRINTERS	92

TABLE B17  
TASKS PERFORMED BY SUPPORT SYSTEMS AND PRINTER/PROCESSOR  
MAINTENANCE PERSONNEL (GRP109)

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
G253 ISOLATE MALFUNCTIONS IN DENSITOMETERS	100
E105 LOCATE PART OR STOCK NUMBERS	100
H376 ISOLATE MALFUNCTIONS IN CONTINUOUS CONTACT PRINTERS	100
G231 INSPECT LIGHT TABLES	100
F378 ISOLATE MALFUNCTIONS IN MANUAL CONTACT PRINTERS	100
G213 INSPECT TIMERS	100
G256 ISOLATE MALFUNCTIONS IN HYDROMIXERS	100
G195 ADJUST DENSITOMETERS	91
H373 INSPECT MANUAL CONTACT PRINTERS	91
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	91
G227 INSPECT DENSITOMETERS	91
H363 ADJUST MANUAL CONTACT PRINTERS	91
F162 INSPECT PROCESSORS	82
H366 CLEAN AND LUBRICATE CONTINUOUS CONTACT PRINTERS	82
H375 INSPECT PROJECTION PRINTERS	82
G308 PERFORM OPERATIONAL CHECKS ON LIGHT TABLES	82
H370 CLEAN AND LUBRICATE PROJECTION PRINTERS	82
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	82
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	73
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	73

TABLE B18

TASKS PERFORMED BY SUPPORT SYSTEMS AND PROCESSOR  
MAINTENANCE PERSONNEL (GRP095)

<u>TASK</u>	<u>PERCENT MEMBERS PERFORMING</u>
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	100
F162 INSPECT PROCESSORS	100
G271 ISOLATE MALFUNCTIONS IN TITLERS	100
G321 PERFORM OPERATIONAL CHECKS ON TITLERS	100
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	100
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	100
G352 REMOVE OR REPLACE TITLER COMPONENTS	92
G236 INSPECT PROCESSOR PUMPS OR FILTERS	92
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	92
F149 CONNECT OR DISCONNECT CHEMICAL REPLENISHMENT SUPPLY	92
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	92
F155 CONNECT OR DISCONNECT PROCESSORS TO OR FROM DRAINS	92
F168 ISOLATE MALFUNCTIONS IN TEMPERATURE CONTROL SYSTEMS	92
F170 ISOLATE MALFUNCTIONS IN WATER SYSTEMS	83
G263 ISOLATE MALFUNCTIONS IN PROCESSOR PUMPS OR FILTERS	83
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	83
F148 CONNECT OR DISCONNECT CHEMICAL CONTROL FLOWRATERS	83
G195 ADJUST DENSITOMETERS	83
G332 REMOVE OR REPLACE DENSITOMETER COMPONENTS	83
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	75

TABLE B19

TASKS PERFORMED BY SUPPORT SYSTEMS AND PROCESSOR  
TECHNICIAN SUPERVISORS (GRP066)

TASKS	PERCENT MEMBERS PERFORMING
B24 COORDINATE MAINTENANCE OR REPAIR OF EQUIPMENT OR COMPONENTS WITH OTHER SECTIONS	100
A5 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	100
E115 MAKE ENTRIES ON ISSUE/TURN IN REQUEST FORMS (AF FORM 2005)	100
F136 REQUISITION SUPPLIES OR EQUIPMENT	100
A1 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	100
D81 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	100
F170 ISOLATE MALFUNCTIONS IN WATER SYSTEMS	100
F171 ISOLATE MALFUNCTIONS IN WATER TEMPERATURE MIXING VALVES	100
F172 DIRECT MAINTENANCE OR UTILIZATION OF EQUIPMENT	91
E116 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	91
B25 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	91
F162 INSPECT PROCESSORS	91
E105 LOCATE PART OR STOCK NUMBERS	91
C54 EVALUATE CORROSION CONTROL PROGRAMS	91
A16 PLAN WORK ASSIGNMENTS	91
A7 DEVELOP WORK METHODS OR PROCEDURES	91
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	91
B37 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	91
F165 ISOLATE MALFUNCTIONS IN CHEMICAL REPLENISHING SYSTEMS	91
F182 PERFORM OPERATIONAL CHECKS ON PROCESSORS	91
F168 ISOLATE MALFUNCTIONS IN TEMPERATURE CONTROL SYSTEMS	82
F175 PERFORM ACCEPTANCE CHECKS ON PHOTOGRAPHIC EQUIPMENT	82
F180 PERFORM CORROSION CONTROL ON PROCESSOR SYSTEMS	82
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	82

TABLE B20

JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE  
 PERSONNEL - GRP031 (N=9)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT ON DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	45
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	34
H	MAINTAINING PRINTER SYSTEMS	15
E	PERFORMING ADMINISTRATIVE FUNCTIONS	5

## REPRESENTATIVE TASKS

TASKS	PERCENT MEMBERS PERFORMING
G236 INSPECT PROCESSOR PUMPS OR FILTERS	89
F167 ISOLATE MALFUNCTIONS IN ELECTRICAL SYSTEMS	89
G234 INSPECT PRINT DRYERS	89
F168 ISOLATE MALFUNCTIONS IN TEMPERATURE CONTROL SYSTEMS	78
F156 CONNECT OR DISCONNECT WATER MIXING VALVES	78
F150 CONNECT OR DISCONNECT EXTERNAL PLUMBING	78
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	78
F151 CONNECT OR DISCONNECT HEAT EXCHANGE DEVICES	78
F152 CONNECT OR DISCONNECT HEAT SENSOR DEVICES	78
F173 MEASURE AND CUT COPPER, STAINLESS STEEL, OR PVC TUBING	67
F162 INSPECT PROCESSORS	67
F171 ISOLATE MALFUNCTIONS IN WATER TEMPERATURE MIXING VALVES	67
F170 ISOLATE MALFUNCTIONS IN WATER SYSTEMS	67
H376 ISOLATE MALFUNCTIONS IN CONTINUOUS CONTACT PRINTERS	67
G195 ADJUST DENSITOMETERS	67
G157 CONNECT OR DISCONNECT WATER SUPPLIES	67
F148 CONNECT OR DISCONNECT CHEMICAL CONTROL FLOWRATERS	67
G261 ISOLATE MALFUNCTIONS IN PRINT DRYERS	67
F155 CONNECT OR DISCONNECT PROCESSORS TO OR FROM DRAINS	67
G340 REMOVE OR REPLACE PRINT DRYERS COMPONENTS	67

TABLE B21  
 MOBILITY LABORATORY MAINTENANCE PERSONNEL - GRP052 (N=7)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT ON DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
M	MAINTAINING MOBILITY LABORATORIES	33
F	INSTALLING AND MAINTAINING PHOTOGRAPHIC PROCESSING EQUIPMENT	27
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	20
E	PERFORMING ADMINISTRATIVE FUNCTIONS	14
A	ORGANIZING AND PLANNING	2

REPRESENTATIVE TASKS

TASKS	PERCENT MEMBERS PERFORMING
M827 POSITION RELOCATABLE FACILITIES	100
M819 MAINTAIN LEVELING JACK HEIGHTS	100
M816 LEVEL RELOCATABLE FACILITIES	100
E105 LOCATE PART OR STOCK NUMBERS	100
M811 INSPECT HYDRAULIC SYSTEMS ON TRANSPORTERS	100
M812 INSPECT MECHANICAL BRAKE ON TRANSPORTERS	100
M826 PERFORM OPERATIONAL CHECKS ON TRANSPORTER HYDRAULIC SYSTEMS	100
F162 INSPECT PROCESSORS	86
M831 SECURE RELOCATABLE FACILITY EQUIPMENT FOR TRANSPORTATION	86
F153 CONNECT OR DISCONNECT INTERNAL PLUMBING	86
M825 PERFORM CORROSION CONTROL ON TRANSPORTERS	86
M830 REMOVE OR INSTALL THREADED INSERTS	86
M813 INSPECT TIRE PRESSURES ON TRANSPORTERS	86
M810 GROUND RELOCATABLE FACILITIES AND ACCESSORIES	86
E123 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	86

TABLE B22

AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL - GRP032 (N=6)  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT OF DUTIES

DUTY	TITLE	RELATIVE PERCENT TIME SPENT
L	MAINTAINING AUDIOVISUAL AND MULTIMEDIA SOUND EQUIPMENT	33
K	MAINTAINING GENERAL CAMERA EQUIPMENT	16
I	MAINTAINING STILL CAMERA SYSTEMS	6
E	PERFORMING ADMINISTRATIVE FUNCTIONS	5
G	INSTALLING AND MAINTAINING PHOTOGRAPHIC SUPPORT SYSTEMS	4
B	DIRECTING AND IMPLEMENTING	2

## REPRESENTATIVE TASKS

TASKS	PERCENT MEMBERS PERFORMING
L701 CLEAN AND LUBRICATE SLIDE PROJECTORS	100
L683 ADJUST SLIDE PROJECTORS	100
L796 REMOVE OR REPLACE SOUND MOTION PICTURE PROJECTOR COMPONENTS	100
L742 ISOLATE MALFUNCTIONS IN SLIDE PROJECTORS	100
L761 PERFORM OPERATIONAL CHECKS ON SOUND MOTION PICTURE PROJECTORS	100
L760 PERFORM OPERATIONAL CHECKS ON SLIDE FILMSTRIP PROJECTORS	100
L723 INSPECT SOUND MOTION PICTURE PROJECTORS	100
L684 ADJUST SOUND MOTION PICTURE PROJECTORS	100
L766 REMOVE OR REPLACE AUDIO AMPLIFIER COMPONENTS	100
L795 REMOVE OR REPLACE SOUND MOTION PICTURE PROJECTORS	83
L794 REMOVE OR REPLACE SLIDE PROJECTORS	83
L793 REMOVE OR REPLACE SLIDE PROJECTOR COMPONENTS	83
L722 INSPECT SLIDE OR FILMSTRIP PROJECTORS	83
L764 PERFORM OPERATIONAL CHECKS ON SPEAKER SYSTEMS	83
L715 INSPECT MULTIMEDIA CONTROL CONSOLES	83
L754 PERFORM OPERATIONAL CHECKS ON MULTIMEDIA CONTROL CONSOLES	83
L687 ADJUST SPEAKER SYSTEMS	83
L747 PERFORM OPERATIONAL CHECKS ON AUDIO AMPLIFIERS	83
L767 REMOVE OR REPLACE AUDIO AMPLIFIERS	83
L716 INSPECT MULTIMEDIA PROGRAMMERS	83

TABLE B29

MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL - GROUP 2  
 INDEPENDENT JOB TYPE  
 RELATIVE PERCENT TIME SPENT ON DUTIES

	RELATIVE PERCENT TIME SPENT
1501 INSPECT AND TEST MOTION PICTURE CAMERA	69
1502 INSPECT AND TEST MOTION PICTURE CAMERA EQUIPMENT	14
1503 INSPECT AND TEST MOTION PICTURE CAMERA SYSTEMS	5
1504 INSPECT AND TEST MOTION PICTURE AND MULTIMEDIA SOUND EQUIPMENT	4
1505 INSPECT AND TEST MOTION PICTURE FUNCTIONS	4

## REPRESENTATIVE TASKS

	PERCENT MEMBERS PERFORMING
1501.1 INSPECT AND TEST MOTION PICTURE CHECKS ON FILM TAKEUP ASSEMBLIES	100
1501.2 INSPECT AND TEST MOTION PICTURE FILM TAKEUP ASSEMBLIES	100
1501.3 INSPECT AND TEST MOTION PICTURE FILM TAKEUP ASSEMBLIES	100
1501.4 INSPECT AND TEST MOTION PICTURE EXTERNAL MAGAZINES	100
1501.5 INSPECT AND TEST MOTION PICTURE MECHANICAL DRIVE ASSEMBLIES	89
1501.6 INSPECT AND TEST MOTION PICTURE CHECKS ON MECHANICAL DRIVE ASSEMBLIES	89
1501.7 INSPECT AND TEST MOTION PICTURE CAMERA HOUSINGS	89
1501.8 INSPECT AND TEST MOTION PICTURE TAKEUP ASSEMBLIES	89
1501.9 INSPECT AND TEST MOTION PICTURE CHECKS ON ELECTRICAL DRIVE ASSEMBLIES	89
1501.10 INSPECT AND TEST MOTION PICTURE IN MOTION PICTURE CAMERA ELECTRICAL DRIVE ASSEMBLIES	89
1501.11 INSPECT AND TEST MOTION PICTURE CHECKS ON EXTERNAL MAGAZINES	89
1501.12 INSPECT AND TEST MOTION PICTURE MECHANICAL DRIVE ASSEMBLIES	78
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1501.15 INSPECT AND TEST MOTION PICTURE FILM TAKEUP ASSEMBLIES	78
1501.16 REMOVE OR REPLACE MOTION PICTURE MECHANICAL DRIVE ASSEMBLIES COMPONENTS	78
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TABLE B24

## V. CAMERA MAINTENANCE PERSONNEL - GRP041

## EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING	EQUIPMENT	PERCENT RESPONDING
<u>MOBILE FACILITIES</u>	30	<u>AUDIOVISUAL EQUIPMENT (CONT)</u>	
<u>STILL CAMERAS</u>	98	BELL & HOWELL SOLWD MOTION PJ	72
C-6 4X5 GRAFLEX	64	GRAPHLEX/SINGER 16mm SOUND MPJ	62
KE-46 XL-75 GRAFLEX	60	CARAMATE SLIDE PROJ/	
KE-48A NIKON F	84	CASSETTE RECORDER	42
KE-58 KONT-OMEGA/RAPID OMEGA	92	REEL-TO-REEL TAPE RECORDER	32
NIKON F-2	72	SYNCHRONIZERS	32
PENTAX SPOTMATIC	40	CASSETTE RECORDERS	62
POLAROID LAND (1D)	50	DISSOLVE CONTROL UNITS	52
4X5 CALUMET STUDIO	68	PUBLIC ADDRESS SYSTEMS	34
4X5 SUPERSPEED 1000 GRAFLEX	48		
4X5 VIEWCAMERA	34	<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	96
<u>COPY CAMERAS</u>	90	CARRYING & STORAGE CASES	30
KE-62 SICKLES	62	MANUAL DENSITOMETERS	60
MP-35 SICKLES 35mm SLIDES	42	DRY MOUNTING PRESSES	68
11X14 PRINCETON	42	FILM DRYERS	80
<u>MOTION PICTURE CAMERAS</u>	68	FLASH UNITS	80
ARRIFLEX 16M	40	KODAK SLIDE MOUNTERS	48
CANON SCOPICS	32	LIGHT ASSEMBLIES	58
<u>AERIAL CAMERAS</u>	30	LIGHT METERS	82
<u>PROCESSORS</u>	92	MANUAL EASELS	52
ME-4 COLOR	34	MIXERS	76
VERSMAT 11CM BLACK & WHITE	34	PEAKO LUX	54
VERSMAT 11CMW BLACK & WHITE	42	PEAKO SLIDE MOUNTERS	62
<u>PRINTERS</u>	92	PH METERS	56
B-15 SIMMON OR EN-52	48	PRINT DRYERS	82
EN-22A	80	REWIND EQUIPMENT	40
<u>AUDIOVISUAL EQUIPMENT</u>	90	SCREENS	40
AQZA BELL & HOWELL 16mm PRO3	40	SENSITOMETERS	60
BELL & HOWELL 545 PROJECTORS	48	SILVER RECOVERY UNITS	74
CARAMATE CAROUSEL PROJECTORS	48	SINKS	72
CAROUSEL PROJECTORS	84	STUDIO LAMPS	74
EKTAGRAPHIC CAROUSEL PROJECTORS	60	TIMERS	90
OVERHEAD PROJECTORS	78	TRIPODS	76
CAROUSEL SLIDE PROJECTORS	88	TRIPODS HEADS	56
		<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	76
		HAND SPLICERS	58
		RICHARDS LIGHT TABLES	44

TABLE B25

## V. CAMERA MAINTENANCE PERSONNEL - GRP041

## TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	94
AMMETERS	46
COLLIMATORS	34
DIODE TESTERS	36
LENS COLLIMATOR	42
LIGHT METER TESTERS	40
MICROMETERS	36
MOTION ANALYZERS	58
MULTIMETERS (PSM-6)	80
OSCILLOSCOPES	40
POWER SUPPLIES	44
PRECISION MEASUREMENT GAUGES	40
STROBOTACS	36
TRANSISTOR CHECKERS	42
TUBE TESTERS	56
VACUUM TUBE VOLTMETER (VTVM)	34
VOLT-OHMETERS (VOM)	52
DIGITAL SHUTTER TESTER	40
<u>SHOP EQUIPMENT</u>	98
AIR COMPRESSORS	40
BENCH GRINDERS	62
DRILL PRESSES	42
HAND TOOLS	98
JEWELERS HAND TOOLS	100
PORTABLE POWER TOOLS	78

TABLE B26

VI. PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT  
MAINTENANCE PERSONNEL - GRP045

## EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING	EQUIPMENT	PERCENT RESPONDING
<u>MOBILE FACILITIES</u>	16	<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	100
<u>STILL CAMERAS</u>	94	CARRYING AND STORAGE CASES	36
C-6 4X5 GRAFLEX	39	MANUAL DENSITOMETERS	39
KE-48A NIKON F	68	DRY MOUNTING PRESSES	52
KE-58 KONI-OMEGA/RAPID OMEGA	71	FILM DRYERS	100
NIKON F-2	55	FLASH UNITS	81
4X5 CALUMET STUDIO	68	KODAK SLIDE MOUNTERS	36
		LIGHT ASSEMBLIES	61
		LIGHT METERS	61
<u>COPY CAMERAS</u>	94	MANUAL EASELS	32
K-62 SICKLES	52	MIXERS	81
MP-3 4X5 POLAROID	32	PEAKO LUX	45
MP-35 SICKLES 35mm SLIDES	39	PEAKO SLIDE MOUNTERS	32
11X14 PRINCETON	32	PRINT DRYERS	97
<u>MOTION PICTURE CAMERAS</u>	26	SCREENS	55
<u>AERIAL CAMERAS</u>	13	SENSITOMETERS	32
<u>PROCESSORS</u>	97	SILVER RECOVERY UNITS	68
VERSMAT 11CM BLACK & WHITE	32	SINKS	77
VERSMAT 11CMW BLACK & WHITE	32	STUDIO LAMPS	87
214K EKTAMAT ONE STEP	36	TIMERS	90
		TRIPODS	74
		TRIPOD HEADS	42
<u>PRINTERS</u>	100	<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	36
B-15 SIMMON OR EN-52	71		
EN-22A	84		
<u>AUDIOVISUAL EQUIPMENT</u>	100		
BELL & HOWELL 545 PROJECTORS	61		
CARAMATE CAROUSEL PROJECTORS	36		
CAROUSEL PROJECTORS	84		
EKTAGRAPHIC CAROUSEL PROJECTORS	39		
OVERHEAD PROJECTORS	87		
CAROUSEL SLIDE PROJECTORS	81		
BELL & HOWELL SOUND MOTION PJ	77		
GRAPHLEX/SINGER 16mm SOUND MPJ	45		
CARAMATE SLIDE PROJ/			
CASSETTE RECORDER	39		
CASSETTE RECORDERS	58		

TABLE B27

VI. PHOTOGRAPHIC SUPPORT SYSTEMS AND AUDIOVISUAL EQUIPMENT  
MAINTENANCE PERSONNEL - GRP045

TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	94
AMMETERS	42
MULTIMETERS (PSM-6)	68
VOLT-OHMETERS (VOM)	36
<u>SHOP EQUIPMENT</u>	100
AIR COMPRESSORS	38
BENCH GRINDERS	32
HAND TOOLS	100
JEWELERS HAND TOOLS	97
PORTABLE POWER TOOLS	68

TABLE B28

VII. PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER  
MAINTENANCE PERSONNEL - GRP040

## EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING	EQUIPMENT	PERCENT RESPONDING
<u>MOBILE FACILITIES</u>	58	<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	95
WS-430	42	DELAWARE TITLERS	66
		RICHARDS LIGHT TABLES	66
<u>STILL CAMERAS</u>	26		
<u>COPY CAMERAS</u>	58		
KE-62 SICKLES	36		
<u>MOTION PICTURE CAMERAS</u>	16		
<u>AERIAL CAMERAS</u>	10		
<u>PROCESSORS</u>	100		
VERSMAT 11CM BLACK & WHITE	56		
VERSMAT 11CMW BLACK & WHITE	49		
VERSMAT 1811CM COLOR	33		
214K EKTAMAT ONE STEP	28		
<u>PRINTERS</u>	98		
B-15 SIMMON OR EN-52	44		
EN-6	34		
EN-22A	79		
EN-67A	33		
MK-2 R5A/B	46		
NIAGRA EN-86A	86		
SP-1070 STRIP PRINTERS LOG E	42		
X-184 DURST	36		
<u>AUDIOVISUAL EQUIPMENT</u>	39		
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	99		
MANUAL DENSITOMETERS	66		
DRY MOUNTING PRESSES	33		
FILM DRYERS	69		
FIXED HEATERS	31		
FIXED WATER CHILLERS	37		
MIXERS	77		
PH METERS	72		
PRINT DRYERS	78		
SENSITOMETERS	83		
SILVER RECOVERY UNITS	79		
SINKS	74		
TACKY ROLL FILM CLEANERS	71		
TIMERS	84		

TABLE B29

VII. PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER  
MAINTENANCE PERSONNEL - GRP040

TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	98
AMMETERS	55
MULTIMETERS (PSM-6)	85
OSCILLOSCOPES	70
POWER SUPPLIES	52
TACHOMETERS	52
TUBE TESTERS	38
VACUUM TUBE VOLTMETERS (VTVM)	49
VOLT-OHMETERS (VOM)	50
<u>SHOP EQUIPMENT</u>	100
ACETYLENE TORCHES	36
AIR COMPRESSORS	74
ARBOR PRESS	55
ARC WELDERS	36
BENCH GRINDERS	88
BENCH PRESSES	46
DRILL PRESSES	82
HAND TOOLS	99
JEWELERS HAND TOOLS	77
LATHES	45
PORTABLE POWER TOOLS	91
SPRAY PAINT GUNS	47

TABLE B30

## VIII. JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER MAINTENANCE PERSONNEL - GRP031

EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING	EQUIPMENT	PERCENT RESPONDING
<u>MOBILE FACILITIES</u>	0	<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u> (CONT)	
<u>STILL CAMERAS</u>	11	SENSITOMETERS	56
<u>COPY CAMERAS</u>	11	SILVER RECOVERY UNITS	78
KE-62 SICKLES	56	SINKS	67
MP-35 SICKLES 35mm SLIDES	33	STUDIO LAMPS	33
<u>MOTION PICTURE CAMERAS</u>	11	TACKY ROLL FILM CLEANERS	33
<u>AERIAL CAMERAS</u>	0	TIMERS	67
<u>PROCESSORS</u>	100	<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	100
FULTRON 111B	78	DELAWARE TITLERS	56
ME-4 COLOR	33	HAND SPLICERS	56
VERSMAT 11CM BLACK & WHITE	67	MOVIOLAS 16mm/35mm	44
VERSMAT 1811CM COLOR	78	RICHARDS LIGHT TABLES	56
<u>PRINTERS</u>	100		
BEACON PRECISION ENLARGER	44		
EN-22A	89		
EN-67A	44		
MK-2 R5A/B	56		
NIAGRA EN-86A	67		
EASTMAN KODAK RAINBOW	44		
SP-1070 STRIP PRINTERS LOG E	67		
BELL & HOWELL 6100 C/6100			
COLOR 16mm	33		
6170D PERFORATORS (PRINTER ACCESSORY)	33		
<u>AUDIOVISUAL EQUIPMENT</u>	33		
<u>SYNCHRONIZERS</u>	33		
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	100		
MANUAL DENSITOMETERS	44		
DRY MOUNTING PRESSES	33		
FILM DRYERS	78		
KODAK SLIDE MOUNTERS	44		
MIXERS	78		
PEAKO SLIDE MOUNTERS	56		
PRINT DRYERS	100		
REWIND EQUIPMENT	56		

TABLE B31

VIII. JUNIOR PHOTOGRAPHIC SUPPORT SYSTEMS AND PROCESSOR/PRINTER  
MAINTENANCE PERSONNEL - GRP031

TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	100
AMMETERS	44
MULTIMETERS (PSM-6)	100
OSCILLOSCOPES	67
POWER SUPPLIES	44
TUBE TESTERS	44
VOLT-OHMETERS (VOM)	44
DIGITAL VOLTMETERS	44
<u>SHOP EQUIPMENT</u>	100
ACETYLENE TORCHES	33
AIR COMPRESSORS	67
ARBOR PRESS	33
BENCH GRINDERS	44
BENCH PRESSES	33
DRILL PRESSES	67
HAND TOOLS	89
JEWELERS HAND TOOLS	67
PORTABLE POWER TOOLS	33
ULTRASONIC CLEANER	33

TABLE B32

IX. MOBILITY LABORATORY MAINTENANCE PERSONNEL - GRP052  
 EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>MOBILE FACILITIES</u>	100
WS-430	57
<u>STILL CAMERAS</u>	14
<u>COPY CAMERAS</u>	14
<u>MOTION PICTURE CAMERAS</u>	14
<u>AERIAL CAMERAS</u>	29
<u>PROCESSORS</u>	100
ES-83 CORRELATOR	57
<u>PRINTERS</u>	57
EN-22A	43
<u>AUDIOVISUAL EQUIPMENT</u>	14
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	100
MANUAL DENSITOMETERS	57
FIXED WATER CHILLERS	43
PRINT DRYERS	43
SENSITOMETERS	86
SINKS	43
TIMERS	43
<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	57
DELAWARE TITLERS	43
RICHARDS LIGHT TABLES	43

TABLE B33

IX. MOBILITY LABORATORY MAINTENANCE PERSONNEL - GRP052  
 TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING
<u>TEST EQUIPMENT</u>	100
AMMETERS	71
MICROMETERS	71
MULTIMETERS (PSM-6)	100
OSCILLOSCOPES	86
POWER SUPPLIES	71
PRECISION MEASUREMENT GAUGES	43
VACUUM TUBE VOLTMETER (VTVM)	43
VOLT-OHMETERS (VOM)	43
DIGITAL VOLTMETERS	57
<u>SHOP EQUIPMENT</u>	100
AIR COMPRESSORS	43
BENCH GRINDERS	43
DRILL PRESSES	43
HAND TOOLS	100
JEWELERS HAND TOOLS	71
PORTABLE POWER TOOLS	71
SPRAY PAINT GUNS	43

TABLE B34

## X. AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL - GRP032

## EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

EQUIPMENT	PERCENT RESPONDING	EQUIPMENT	PERCENT RESPONDING
<u>MOBILE FACILITIES</u>	33	<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	67
<u>STILL CAMERAS</u>	67	HAND SPLICERS	33
C-6 4X5 GRAFLEX	50	MOVIOLAS 16mm/35mm	33
KE-48A NIKON F	50		
KE-58 KONI-OMEGA/RAPID OMEGA	33		
NIKON F-2	33		
4X5 CALUMET STUDIO	33		
4X5 SUPERSPEED 1000 GRAFLEX	50		
<u>COPY CAMERAS</u>	33		
<u>MOTION PICTURE CAMERAS</u>	50		
<u>AERIAL CAMERAS</u>	0		
<u>PROCESSORS</u>	17		
<u>PRINTERS</u>	17		
<u>AUDIOVISUAL EQUIPMENT</u>	100		
AQZA BELL & HOWELL 16mm PROJ	67		
CAROUSEL PROJECTORS	83		
EKTAGRAPHIC CAROUSEL PROJECTORS	83		
HIGH SPEED 16mm PROJECTORS	33		
OVERHEAD PROJECTORS	67		
CAROUSEL SLIDE PROJECTORS	83		
BELL & HOWELL SOUND MP PROJ	83		
GRAPHLEX/SINGER 16mm SOUND			
MP PROJ	33		
REEL-TO-REEL TAPE RECORDER	50		
SYNCHRONIZERS	50		
CASSETTE RECORDERS	50		
DISSOLVE CONTROL UNITS	50		
PUBLIC ADDRESS SYSTEMS	67		
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>			
ANALYZES	33		
MANUAL DENSITOMETERS	33		
DRY MOUNTING PRESSES	33		
FILM DRYERS	33		
FLASH UNITS	33		
TIMERS	33		

TABLE B35

X. AUDIOVISUAL EQUIPMENT MAINTENANCE PERSONNEL - GRP032  
 TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	100
AMMETERS	50
MOTION ANALYZERS	33
MULTIMETERS (PSM-6)	100
OSCILLOSCOPES	50
POWER SUPPLIES	50
PRECISION MEASUREMENT GAUGES	33
VOLT-OHMETERS (VOM)	50
<u>SHOP EQUIPMENT</u>	100
AIR COMPRESSORS	50
BENCH GRINDERS	50
BENCH PRESSES	50
DRILL PRESSES	100
HAND TOOLS	100
JEWELERS HAND TOOLS	100
PORTABLE POWER TOOLS	67

TABLE B36

XI. MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL - GRP028  
 EQUIPMENT MAINTAINED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>MOBILE FACILITIES</u>	0
<u>STILL CAMERAS</u>	56
KE-48A NIKON F	33
KE-58 KONI-OMEGA/RAPID OMEGA	33
NIKON F-2	44
<u>COPY CAMERAS</u>	11
<u>MOTION PICTURE CAMERAS</u>	100
ARRIFLEX 16BL	33
ARRIFLEX 16F	44
BELL & HOWELL 70 DR (B1A)	33
MITCHELL HIGH SPEED	33
MITCHELL 16mm	56
MITCHELL 35mm	44
<u>AERIAL CAMERAS</u>	78
DBM-4	33
DBM-5	56
PHOTOSONIC	44
<u>PROCESSORS</u>	11
<u>PRINTERS</u>	11
<u>AUDIOVISUAL EQUIPMENT</u>	44
CAROUSEL SLIDE PROJECTORS	33
BELL & HOWELL SOUND MP PROJ	44
<u>PHOTOGRAPHIC SUPPORT EQUIPMENT</u>	33
LIGHT METERS	33
<u>PHOTOGRAPHIC EDITING EQUIPMENT</u>	22

TABLE B37

XI. MOTION PICTURE/AERIAL CAMERA MAINTENANCE PERSONNEL - GRP028  
 TEST AND SHOP EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT RESPONDING</u>
<u>TEST EQUIPMENT</u>	100
AMMETERS	33
BORESIGHTING TOOLS AND ALIGNMENT FIXTURES	56
COLLIMATORS	44
LENS COLLIMATOR	44
LIGHT METER TESTERS	44
MICROMETERS	44
MULTIMETERS (PSM-6)	89
OSCILLOSCOPES	56
POWER SUPPLIES	44
PRECISION MEASUREMENT GAUGES	44
STROBOTACS	44
<u>SHOP EQUIPMENT</u>	100
AIR COMPRESSORS	56
HAND TOOLS	100
JEWELERS HAND TOOLS	100
PORTABLE POWER TOOLS	56